

A GENERAL
HISTORY
OF
DISCOVERIES
AND
IMPROVEMENTS,

In useful ARTS,

Particularly in the great Branches of
COMMERCE, NAVIGATION, and
PLANTATION, in all Parts of the
known WORLD.

A Work which may entertain the CURIOUS with
the view of their present State; prompt the in-
dolent to retrieve those Inventions that are neg-
lected, and animate the diligent to advance and
perfect what may be thought wanting.

To be continued Monthly.

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PREFACE

TO THE

Monthly Undertaking.

AS the most glorious Empires in the World had their beginnings in the little Adventures of single Men, or the small Undertakings of a few; so the most flourishing Arts, the most useful Discoveries, and the most advantageous Improvements, which the World now boasts of, had their Foundations in small Things, and from thence have encreased, and been brought to their present perfection by the application of private Men, whose inspired Minds have guided them to propagate useful Knowledge, for the good of Mankind.

THE same Zeal for the general improvement of the World which inspired those patrons of Wisdom to undertake great Things, prompts us to give our Age the History of their Discoveries, and Improvements; that Men of the same Genius may be encouraged from the success of former Times to pursue the like useful Discoveries for the benefit of the Ages to come.

WE have infinite advantages beyond what the *Antients* could pretend to, and vast helps in the search after Knowledge, which they were utterly destitute of; for we stand upon the shoulders of three thousand Years application, and have all the benefit of their Discoveries, and Experiments handed down, gratis, to improve upon, and to encourage our Enquiries.

THEY have search'd Nature to the bottom, inside and out-side; they have as it were anatomiz'd the Globe, and given us the naked Skeleton of its most secret Parts, for us to act upon in our farther Enquiries: Neither the height of Heaven, the depth of the Sea, or the breadth of the Earth have escaped them; and if they have not discovered all that is to be known, they have nobly led us by the Hand to the very Door, where what remains is to be found.

IT is a most pleasant Retrospect they afford us of what is past, and Nature adds as agreeable a Prospect of what is to come; they have open'd her Book, and read far in it, but she shows us many Leaves, not yet turn'd over; and assures us, she has reserv'd sufficient to encourage, and to reward our future Enquiries.

What's yet discover'd only serves to show
How little's known, to what there's yet to know.

UPON this Supposition, the present Work is founded, and we promise our selves we shall be able, not only to give a pleasing History of past Discoveries, but a profitable view of what may yet be undertaken.

THE Connection of past things with present, the State of the antient World, with the State of things Modern, in order to describe the growth of things from what they were to what they now are; makes it absolutely necessary to begin our Accounts at the beginning of those things which we give an account of; how else could we call our Work a History, much
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less a Compleat History? Nor could our relation of the improvement of Arts, and Science, Navigation, or Plantation, be satisfactory to the curious and enquiring Reader, if we did not give an account of those Arts and Sciences from their beginning, and tell who were the Inventors, who the Improvers, and who the Patrons of them through all the Ages of their improvement in the World.

THUS in showing the growing progress of that most useful part of the Mathematicks, which we call Navigation, and also those surprizing Improvements which we may indeed call the perfection of human Knowledge, I mean of Astronomy, and the Motions, Influences, and Revolutions of the heavenly Bodies; How can we profitably describe the things themselves without giving some account of their first Introduction; I mean, to whom Heaven first communicated those Beams of Light; how, and in what manner they have been improv'd, farther and farther insight into those mysteries obtain'd, and the Science it self brought to such perfection, as we see it now is?

THE Historical account of the advances made by every Age in those things may be as pleasing, and instructing to the enquiring Reader, as the study of the things themselves; and may stir up the curiosity of those, not yet fully inform'd, to a desire of a more perfect Knowledge.

HOWEVER, tho' such a Retrospect is necessary, yet we have endeavour'd to make our History of past times, (especially of those most remote) as brief as may consist with a necessary enquiry into useful things, and shall dwell no longer upon the dark beginning of those things, than to point out the Time and Persons from whence they are derived: As we come on and advance nearer our own times the nature of things will call for a fuller description, and as that description will be the more fruitful of incidents, so it will be more agreeable to our curiosity, and more instructing,
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and particularly as it will kindle new desires after the farther Discoveries, and Improvements, which are still behind; of which we shall not fail to give a very full, and we believe a very satisfactory Account.

BT this short Retrospect, we shall have the pleasure of meeting with a vast variety of useful and pleasant Discoveries, which however they had their time of being accepted, and well receiv'd in the World, seem now to be as it were forgotten, and only look'd back upon in speculation; and yet may for ought we know be profitably reviv'd as much as any thing of that kind can do, and several others too many to mention here.

WE have taken notice in the beginning of the Work, how many parts of the World which have been peopled and planted, cultivated and improv'd have, by the fate of Nations been again laid wast, and have return'd to their primitive, undiscovered State, and that before the native Wealth of those Countries had been fully improv'd, or their secret Treasure exhausted; which Countries (especially as the Commerce of the World is now establish'd) merit very well to be repossess'd, the parts of them to be again discovered, and search'd into, and the whole to be restored to its primitive usefulness for the good of Mankind; such are the several Countries of Asia Minor now in possession of the Turks; the rich Country of Ethiopia on the West border of the Red Sea; the North Coast of Africa in the Mediterranean Sea, and several others; of which a distinct Account will be given, not so much as to what they have been, but as to the infinite benefit they might now be to the trading part of the World, and that prodigiously more than ever they were before.

IN our accounts of Improvements and Discoveries, which are yet behind, and which Mankind have before them for the encouragement of their Industry, we shall not amuse our Readers with remote and suggested possibilities, or run them upon dangerous and impracticable

cable Projects, such as mad Men cannot, and wise Men will not meddle with: This wou'd be to puzzle and perplex our Readers with dark Schemes and unintelligible Proposals, which have neither probability of success to encourage the attempt, or rational foundation, to make them entertaining to the Reader.

ON the contrary we shall endeavour to show the reasonableness of every undertaking on one hand, and Feizableness of it on the other; and if as a whet to the Industry of the Ages, which may make the attempt, we should show the certainty of profit to the Undertakers, every Reader will be judge of the Fact, and to every Reader, therefore we make our Appeal.

THE World has been long perplex'd about an intricate Affair, which some have promis'd Mankind they shall one time or other be much the better for, and that it shall be fully discover'd to them; I mean the LONGITUDE, or the settled distances of East and West; we shall in the process of this Work endeavour to put an end to the Importance of that Search, by setting two things in a clear light about it.

- I. THAT it can never be fully and finally ascertain'd, and perhaps very little more than it already is, and that therefore 'tis to no purpose to spend any farther time about it.
- II. THAT it is not so very essential to the World, as some would have us believe, and in short, that as to the great Article of human Knowledge, 'tis not one Farthing matter whether it be more fully discover'd or no.

IN like manner the World has been long taken up with an enquiry, whether there is not a passage to be obtained either by the North-East, about the North parts of Europe and Asia, or by the North-West, about the North parts of America to China and Japan;

pan ; and many fruitless Voyages have been made, and many a stout Mariner been drown'd or frozen to Death, in the search after these Discoveries.

IN the process of this Work we shall show the weakness of all those attempts the real impossibility of the Discovery it self, and the impracticableness of those Seas as to its being perform'd ; were a discovery of a continued Sea really made ; and with all we shall show how the World may at a very small expence come to a certainty is the great Question it self, namely, whether there be really a continued Sea or no.

OUR Schemes of Improvement as they respect Trade will chiefly consist of these very useful parts.

- I. THE discovery of several parts of the World, and passage to them, which have not been yet known.
- II. THE farther discovery of such Parts as are yet, but imperfectly known.
- III. THE better improving, as well the Soil as the Commerce of those Countries which are fully known, and Discover'd.
- IV. THE discovering several branches of Commerce not yet known, or meddled with in the World.
- V. THE extending our present Commerce into several parts of the known World, where it has not yet been practis'd.

OUR propos'd improvements of Arts and Science will be either touch'd at in the several Heads of Discoveries as we go on, or be spoken to under particular Heads by themselves, as occasion requires.

IT wou'd swell this Part too big for a Preface to give a more particular account of all the other Parts of this great Undertaking ; we are rather content to venture it upon the Candour of the curious Reader, and expect its success only from the merit of the Performance.



INTRODUCTION.

WHEN the Almighty, immediately after the DELUGE, restored Man to the Possession of the *Globe*, he deliver'd it to him as an *universal Blank*: He bid him *indeed* encrease and multiply and replenish it, *that is*, people it, spread a numerous Race upon it, that should at once both keep Possession, and enjoy the Product: But he told him nothing of what it was able to do for him; leaving that to his farther Enquiry.

THE World was to him like a rough Diamond, that has its intrinsic Value in it self; but the Outside conceal'd the Inside, and it was for him to polish it, that its Lustre might appear.

THE Sea was fill'd with Fish, but Man had no Knowledge of what they were good for; it was capable of being made use of for Trade, and Converse of Nations; but Mankind knew nothing of Ships, or Navigation.

THE *Land* was capable of producing all the good Things which we have seen grow upon its Surface;

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but Man had made no Experience of its Fertility : It had in its Bowels all the Wealth which we see since drawn from it; But our Progenitors knew nothing of the means how to come at it, or the method how to manage it when they had gotten it: The Gold was no Snare; the Iron uncapable either of Offence or Defence; the usefulness of Copper, Tin, and Lead were of no benefit, for Science *was not*, and Art *was not*, and in a Word, the Men that Nature produc'd were perfectly and completely Ignorant of what the World was, or what might be done to bring it to be any thing, but what it appear'd by its out-side, much less to what we have since found it to be: All this was left to the Inhabitants, to find out gradually as they wanted it, and to improve as they went on in the *Discovery*.

HOW, and by *what Steps* these Discoveries were made, and as near as we can, *when*, and by *whom*; what Uses the Discoveries that have been made have been apply'd to; how the Genius of Men is improv'd by such Discoveries, and how much farther such Improvements may probably be carry'd: These will be the Subject of our future Enquiry in these Sheets.

IN this Important Search we shall necessarily Observe, how these *Discoveries* have naturally tended to the *Improvement* of Mankind in all the Parts of useful Knowledge, and the Tendency an Encrease of Knowledge has had to encreasing the Felicity of Man's Life, to the supplying him with Conveniences for living, and Instructing him to the best use of those Conveniences: *In a Word*, how much Superior every Generation has been, because Wiser than those who went before them; whether they have been Better, for all their Knowledge, or Worse, is a Question by it self.

I HAVE often observed that the gradual Improvement of the World by those early Discoveries deserves a History, and really I must acknowledge that I think, we very much want that History, and that on many Accounts.

I. WE are not only Ignorant (in this Age) of the Reason and Nature of the most early Improvements of Mankind, but weakly contenting our selves with our eager Desire of looking forward for more, we really have lost many of the most useful Branches of Knowledge, and of Art, and are without the benefit of many of the best Discoveries which these first Ages made use of; some of which were so beneficial to them, and might be still so to us, if not neglected, and as it were forgotten.

II. SEVERAL Countries, discover'd and planted by the Antients, the Fertility and Advantage, of which, were infinitely Great, are as it were deserted again, and left to wild nature; Unpeopled, and over-run with Woods and wild Beasts, and even, require a New Discovery, and a New Plantation to render them useful to the World, as they ought to be, and as they were before.

III. WE run away now, to *India*, *China*, the remotest Parts of *Asia*, to *Chili*, *Brasil*, and the farthest Part of *America*, for the very Product and Wealth which the Countries known in these most Early Discoveries, are qualified fully to supply us with; and perhaps with half the Hazard, Trouble, and Experience as the other.

THESE and many other Reasons confirm what I have said above, that 'tis very necessary to preserve the Memory of the most Antient Improvements, that we may see whether we have any need to run so much after New Discoveries, till we make the utmost Advantage of the Old Ones; and whether, while we strive to possess new Countries and carry on new Commerce, we do not abandon others

thers already known, and leave them to be forgotten, which would abundantly satisfy as well our Ambition, as our Avarice, by their Product and Capacity of farther Improvement; without putting us to the Expence of running so far off.

BUT this is not all; by looking back upon the Early Improvement of the World, we should with Pleasure see how Mankind gradually spreading over the whole Surface, dip'd into the Wealth and Product of the several Countries, by the Industry and Application of the several Ages Inhabiting those Countries; and how those gradual Improvements dropt again as the diligent Inhabitants were removed by War, Conquests, or other Accidents, and the over-running Injuries of Barbarous Nations; also how easily the Fertility and Advantages of those Countries might be restor'd, and this Part of the World reap the benefit of it, if due measures were yet taken to bring it to pass.

THESE are some of the Blessings we may find by looking back into the former State of Things in the infant World, and especially in those Nations, which being once the Center of Commerce, as well as of Arts and Sciences, are since lay'd Desolate and over-run with a Barbarous People, who utterly neglecting those Improvements, have turn'd the most delicious Countries, formerly *flowing with Milk and Honey*, into a Desolate Howling Wilderness, and the most fruitful Provinces of *Asia, Greece, and Africa*, which formerly maintained Millions of Inhabitants, to be scarce able to feed the Wild Creatures that inhabit there.

A N Impartial full History of these Things will bring us down by just gradations to our own Times. Looking into Antiquity, is a Dry, Empty, and Barren Contemplation, any farther than as it is brought down to our present Understanding,
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and to bear a steady Analogy of its parts, with the Things that are before us.

O U R Times are as proper, our Circumstances as suitable, and our Genius and Temper, as forward for *Discoveries* and *Improvements*, as any that have been before us, however Antient, tho' we should look back to the most early Times; and give me leave to add, we have as fair a Field for Discoveries and for Improvement, even as the old *Phœnicians* had, of whom we may say, they had the whole World before them, our Advantages also and Ability for carrying on such Discoveries are infinitely Greater.

IT is true we are fond of running into the remotest Angles of the Globe for Discoveries, as if nothing was able to satisfy us that had been known before, and to those who continue that Humour, and think no Improvement can be made nearer home, this History will be but of little use; but I am hopeful, that after a View of these Sheets, there will be but few left of that Mind. I shall in these Discourses therefore shew some Schemes of *Improvement* and some *Discoveries*, well worth the undertaking of those who have the most enterprising Genius; and where there is yet room, not for Companies and Colonies only, but for whole Nations, and Generations of Nations, even as long as the World shall last, to plant on, and Time remains to undertake it in.

B U T again, to those who are dispos'd to search for Improvements where they are to be found, and who are capable of believing that there are things forgotten that may yet be re-assum'd, and things never known which may yet be discover'd, tho' nearer home, and easier to be found than by Circling the Globe: To such, this Work will, perhaps, be as Profitable, as Pleasant, at least, we shall give them

them in *Miniature*, and in Speculation, such practicable Things as they may not yet have consider'd, and as may some time or other rouse up Adventurers to undertake; that according to the undoubted design of that Providence which made the World, it may first or last be fully Improv'd, its Treasures fully Discover'd, and all that intrinsic Wealth which Heaven furnish'd the Globe with, be found out and made use of, as he certainly at first intended it shou'd be.

I cannot believe that God ever design'd the Riches of the World to be useless to the World; that the Gold, the Silver, the Diamonds, and other Species of such Immense Worth and Value, was ever created in the Bowels of the Mountains, and the most hidden Parts of the World to lye buried there, and remain unprofitable, till they come to be melted down again in the *General Conflagration*: God will stand in no Need of the Salts and Sulphur, the Minerals and Combustible Materials, which the Earth is so full of, to assist his Power in kindling the last Fire, or setting the Earth in a Flame for the Destruction of it.

THE Learned *Burnet* in his Notion of the Conflagration's beginning in *Italy*, because the Soil was full of *Sulphur*, and for the more immediate ingulphing the *Whore of Babylon*, might as well have kindled it at Mount *Heckela*, in *Iseland*, where the whole Island is thought to be a solid Mass of Brimstone; or about *Newcastle* in the North of *England*, where the Mass of Bitumen is as proper to set the World on Fire from a Coal Pit, as the other is from a Mine of Sulphur; as for the *Mystical Babylon*, I mean *Rome*, (whatever her distance might be) when once that Flame is begun, I believe the whole Globe will so soon become one immense *Fire-Ball*, that the *Whore of Babylon* will quickly be in the middle

middle of the blaze, without any possibility of an Escape.

IF then the Subterranean Wealth of the World is yet to be fully trac'd to its Fountains, and that some time or other, it must be all made use of, *as I firmly believe*, why shou'd not these Ages come into some of it as well as their Neighbours? and why not *now* as well as *hereafter*?

I look upon the Northern and Western Parts of *Asia*, and of *Africa* also, and the Eastern Parts of *Europe* too, to be like Mines of Gold and Silver, which being formerly found out, and as we may say enter'd upon in part, were left off before they were *half wrought*; the Reason of it we shall touch at as we go, but the Fact being prov'd, why shou'd we not enter upon these Works again, that the Inexhausted Treasure being farther search'd into, and the discovering the bottom of them re-assumed, all that Nature had hid, and the Almighty has reserv'd for us, may be found out, and the World made as Rich, and as Learned, in all necessary Knowledge, as they were intended to be at first? and that as their Maker has made a plentiful Provision for them, they may let him know how ready they are to accept of, and improve it?

WHY are all the Coasts of *Africa*, which formerly were so Populous, so well Inhabited, so Rich, so well Improv'd, and so abounding in Gold and Silver, from their own Mountains, and with Corn and Cattle from their own Plains, abandon'd now to a Generation, who as if bountiful Nature was not able to feed them, *where formerly she fed and enrich'd so many Millions at once*, are as it were driven to inhabit only the Sea-Coasts, and to seek there, by Rapin and Piracy, to subsist and support themselves?

WHY are all the Doors of Commerce stop'd up between *Europe*, and the *African*, *Ethiopia*? a Coun-
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try stor'd with such an immense Wealth, such quantities of Gold, such exquisite Product for Trade, such rich Gums and Drugs, such numbers of Cattle, quantities of Corn, and such a docible People are able, and indeed qualified, to bring ten times more Wealth into *Europe* by Trade, than all the Empires of *New Spain*, at least, under their present Management, do bring to the unimproving *Spaniards*, or are ever like to do.

WHAT blocks up this Commerce now? Nothing, but what might soon and easily be removed, namely the *Turks*; a People, who even by Maxims of their Religion, are Enemies to all Improvements of this kind, and who rather desolate the Nations, than plant or people them: These are indeed the Present, and the only Hindrances by destroying the Navigation of the *Nile*, which comes directly from the *Ethiopian Lake Dombea*, to *Grand Cairo*; and which tho' there are some Obstructions of Cataracts in the Chanel, has yet other smaller Channels, which might preserve the said Navigation, as also the Navigation of the River *Nubia*, which runs into *Nile*, and which would maintain a Communication with the Southern Limits of the Greater *Libya* and *Numidia*; of both which I shall have an Occasion to speak largely in their Course.

BUT the *Turks*, if they cannot be removed or perswaded to open the said Passages, may not be able wholly to stop the Current of such a beneficial Commerce, as might be open'd on that side of the World; if the Trading Nations would join together to undertake it: That Trade may be carryed on many other Ways, as will be explain'd in its Course.

THIS is mentioned here only as a Specimen, a Field of new Discoveries and Improvements which lyes open to the Industry and Application of this Northern Part of the World; there are not less
Advan-

Advantages to be found in reviewing the all-ready discover'd Parts of the World, where Time, and a Succession of Barbarism, have *as it were*, taught us to forget that they were ever known.

THE reviving the Knowledge of antient Times must necessarily be very profitable to our modern Enquiries, if they might be encouraged; and to make a beginning, that where old *Improvements* being lost they may be recover'd, and where there is room for an Addition of farther *Discoveries*, they may yet be made, for the benefit both of Learning and of Commerce, this, *in short*, is the substance of the present Undertaking.



CHAP. I.

Of the first Ages after the Flood, and how Mankind liv'd for some time; what Improvement they then made; and how they spread themselves in the World for the first 300 Years.

ACCORDING to the best Accounts of those Times, Noah and his Sons coming out of the Ark upon the Mountains of *Armenia*, which are to this Day call'd *Ararat*, or as some will have it, of *India*; (where being the same ridge of Mountains they were still call'd by the same Name) did not spread themselves very far for some Years, but descending from the Hill, extended themselves upon the beautiful plain Country, which lyes *South* and *East* of the Mountain, and there began to cultivate the Earth as Husbandmen, for so the Scripture says of them, and to that the Tradition of the People, in those Countries agrees.

I doubt not but this Cultivating the Earth, which the Scripture expresses by *Noah's* being an *Husbandman*, was to be understood, that he plow'd and sow'd, or dug and planted Corn for Bread for the Subsistence of his Family and Posterity ; and that long before he planted Vines or a Vineyard, as it is express'd in Scripture.

THIS Planting and Sowing of Grain for Food, was indeed his first Labour, but the planting the Vineyard I call the first *Improvement*, for it certainly came after the other, a considerable time : Corn he sowed immediately, but Vines he undertook as an Improvement, and which he had none of for some considerable time.

How long it was between the Year of the Flood and this planting a *Vineyard*, or at least before the Vines were brought to Perfection, we have no certainty from History ; but this we know from the Scripture, that it was not till *Canaan* the youngest Son of *Ham* *Noah's* youngest Son, was grown up to be a Man ; for *Noah* gives out the heaviest part of the Curse, for exposing and ridiculing his Drunkenness, to fall upon *Canaan* the Son of *Ham* ; not upon any of the rest of his Children, or of his Brother's Children ; and this therefore could not be suppos'd to be less than twenty or thirty Years ; for *first*, he was not born till five Years after the Flood at least, being the fourth Son of his Father ; and *secondly*, he must be suppos'd to be at Man's Estate, for it is the Opinion of the most Learned Annotators that it was *Canaan*, not *Ham*, that saw and expos'd the Nakedness of his Grand-father ; Why else should *Noah* omit his Father *Ham*, and load the Curse all on the back of *Canaan* his Son ?

UPON the whole, I note it on this Occasion, and so far it is to my present Purpose.

First, THAT Husbandry was the first Employment. And,

Secondly,

Secondly, PLANTING of Vines was the first Improvement after the Flood.

NOAH it seems had but ill luck with his first undertaking, viz. to be debauch'd with his own new Wine; But that was his own fault, not the fault of the Wine.

SOME think as the *Devil* tempted *Eve* to eat, in the shape of a Serpent, that is, as Mr. *Milton* describes it, entered into the Serpent, that he might speak to her by an articulate Voice: So he enter'd here into *Canaan*, and set him to Work, to prompt the Old Patriarch to drink; alledging to him the goodness of the Liquor, its sanative Virtue for the support of his Age, and the like; Drinking to him, or filling to him, and perhaps, pressing him to drink, till the Old Patriarch was surpriz'd, and took too much, or in short, till, as the Drunkards call it, he drank him under the Table; and then, *Devil* like, made Game at him; for which, his old Grand-father most heartily cursed him.

THIS I take to be a much more rational Account of it, than that *Noah*, who was then in the Seventh Century of his Life, shou'd not understand the strength of the Grape, or know that the luscious Juices, if taken too freely, wou'd intoxicate his Brain.

THESE Vines were planted, as the *Greek* Inhabitants tell us, on the slope of the Hill *Ararat*, towards the South, and where they have very rich Wines to this Day; which they tell you are of the very same Grapes, tho' not the very same Plant or Vine that *Noah* planted; and it is not very hard to get Drunk with them, for they are very strong Wines at this time.

FROM hence to the Confusion of *Babel*, we do not find the Posterity of *Noah* travel'd very far from Home; and that tho' it was 131 Years from the Flood to the end of the Building of *Babel*, and

by the undertaking it self, we may suppose they were very Numerous; yet it seems they had not separated to *replenish the Earth*, as God had commanded them; but had only reach'd to the Bank of *Euphrates*, or *Tigris*, where they dwel't, as it were all together, and spread only round themselves, and thus they intended to live, it seems; or else they wou'd never have built such a whimsical Fabrick, and with such ridiculous Views, namely, that it shou'd reach up to Heaven, and save them in case of another Deluge.

OTHERS are of Opinion that they were not so stupid as we make them; that they did not build it for a *Stair-Case* to clamber up to Heaven by, as the Text seems to intimate; but for a Mount to fly up to, in case of a Deluge, and that it contain'd innumerable Vaults and Arches on either hand of the ascent to contain supplies of Provisions and Cattle, &c. for their Subsistence.

BUT be it which it will, it was ridiculous enough, that's certain, and shew'd that in those first Ages, they were but very ill furnish'd with Understanding, either of the Power of God, or of the Constitution of the World; and how ill able such a Building wou'd be to bear the shock of the Waters of the Deluge, in case another shou'd happen.

THAT which is most wonderful to me in it, is this, that *Noah*, who was still alive, and his Sons, which we know were all alive at that time, shou'd not be able to convince them of their folly and madness; but that they wou'd go on with it, notwithstanding all his Cautions, and to besure, Perswasions to the Contrary.

BESIDES, this Work was a Contempt of God's Blessing, *Gen. ix. 1, 7. Verses, Be fruitful, and multiply, and replenish the Earth. And again, v. 7. Be ye fruitful, and multiply; and bring forth abundantly*
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in the Earth; which evidently intimates that they shou'd separate themselves, and spread themselves over the Face of the whole Earth, as they were before the Flood, and not keep together in one place *as they were then*; all which their Maker knew wou'd be practicable when their Number came to swell, and that even the whole Earth thereabouts, and so cultivated only, wou'd not subsist and maintain them.

For this Reason Heaven thought fit to confound their Speech, if the Text is to be understood literally; upon which, and we may say, as soon as they found the various Dialects, or Speeches, which they now spoke, being restrained to Families and Tribes, they immediately separated, and set out, some one way, and some another, upon *New Discoveries*; and this brings on our present main Purpose.

By this Separation of the People into Nations, and their going to seek their Fortunes, *as it may be call'd*, they might be truly said to wander, *Ubi fata vocant*, as Heaven secretly directed them; for certainly in their first Journeyings from *Babel*, which they had been Building, they knew nothing of whither they went, and but little of what they went about; but went some one way, some another, as if their chief Care had been only to keep as far off from one another as they could.

As they travel'd thus, I say, some one Way, some another in search of new Discoveries, so we cannot doubt but that every Nation made *Discoveries* suitable to their Enquiries; for the World lay open before them, and where-ever they went they found the Country pleasant, the Air agreeable, and the Soil fruitful, so that every Family had room to choose in, to their full satisfaction; and accordingly fixing themselves in such places, as by situation and pleasantness, best suited them, they soon peopled all the adjacent Countries; and so as their
Number

Number encreased, they went on farther and farther, still planting and cultivating as they went.

THEIR greatest Improvements, in their first settling out, were only such as tended to settle the wandering Condition of their Families, and their Properties, in the Countries which they took Possession of; as to every thing else, they seem'd for some Ages under the mere Law of Nature; their Government was Patriarchal, the Father of every Tribe being the Sovereign, or King of all the subsequent Branches; every other Father, having Families of their own begetting, bare Rule, as so many Viceroy's under the Patriarchal Monarch, as long as he liv'd; and thus they went on, till several Tribes encreasing, and growing Populous, made themselves Kings and Governours; who, as it continued for many Years after, Governed whole Cities, with the Districts belonging to them, as absolute Monarchs, and whom no Man durst disobey, on the Penalty of Life: As for their Commerce, at least, as far as we can come at the Knowledge of it, 'twas wholly confined to the two great Articles of *Corn* and *Cattle*; both which, as it was the first Employment of the People, and they depended upon these for their Conveniencies and Subsistence, so I do not call them part of their Management and Improvement at all.

BUT this is not my Enquiry, for I have purposely avoided all Deductions relating to the Government of Nations, only just so far as it is concern'd with our other Design, and then shall touch it but very lightly neither.

SIR *Walter Raleigh* gives us an Account, very Particular as well as Authentick, of the Rout that the several Families of the Sons of *Noah* took, after the Confusion of *Babel*; which as it may be useful in
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the future Enquiries I am to make. I shall just touch at, thus.

First, ABOUT 130 Years after the Flood, a great Body of the multiplyed Sons of *Noah* journey'd from the Place where the Ark rested, whether in *Armenia*, or the Borders of *India* and *Persia*, (is not our business) to *Shinaar*, and there they call'd a great Council, where they made that wise Resolution of building a City, and a Tower, &c. which we call *Babel*.

Secondly, THAT from thence, God having confounded their Language, or as some have it, their Councils, they separated themselves, and as the Text says, *The Lord scatter'd them over the Face of all the Earth*.

Thirdly, THAT upon this Separation, the Sons of *Japhet* spread themselves to the North-West, and inhabited the Lesser *Asia*, and all *Europe*, with the Countries of *Armenia*, *Georgia*, *Tartary*, &c.

Fourthly, THE Sons of *Sem*, or *Shem*, spread themselves to the South and East, possessing all the Country, now call'd *Persia*, part of *Tartary*, *India*, and away to the farthest Eastern Part of the World, even to *China* and *Japan*.

Fifthly, THE Sons of *Ham*, or *Cham*, who were the first who fell upon the Improvement of Arts and Sciences, and also Adventures for Discoveries of Nations, went Westward and Southward from *Shinaar*, and planted the Countries of *Chaldea*, *Syria*, and *Canaan*, *Arabia*, *Egypt*, *Ethiopia*, and all *Africa*.

THIS is the general Scheme only, of their Separation, as for the particular Countries, which every Tribe or Family possessed, and where they planted themselves, as it is too long to enter upon in this Work, and also is not in my main design, I omit the Description, as not much to the purpose, in this place, but may touch upon it as we go along.

CHAP.



CHAP. II.

Of the particular Travels of Ham or Cham, the youngest Son of Noah, and his Posterity; and how, among them, began the first progress of Art and Science, Commerce, and the Improvement of Commerce in the World.

THE Sons of *Ham* or *Cham*, as I have said, marching, West and South-West, from *Sbinaar*, we shall trace them a little more particularly than the rest, because among them we shall find the beginning of the most useful Arts, and of the sublimest Knowledge that Mankind was first blest with, of which such great Improvements have been made, as we see this Day; and this is the Reason of beginning this Discourse so far back.

AMONG these, we find the knowledge of *Astronomy*, with the Motions and Influences of the Heavenly Bodies; which began first to be studyed among the *Arabians*, and by the *Egyptians* improv'd to a very great Height, tho' under the mistaken Foundation of *Ptolemy*; whose description of the Heavenly Bodies, dividing them into Constellations, and solving the difficult Phenomena of their Motions, Revolutions, Eclipses, and Conjunctions, &c. is call'd to this Day the *Ptolemaick System*.

AMONG these, we find the first knowledge of Letters, forming of Speech into Words, and these Words being by prolation of Syllables, and Letters, and the giving Sounds to them made to speak, so as to be capable of conveying the meaning
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of one another at the greatest Distance, which we call Writing.

AMONG these, we find the first knowledge of Ships and Vessels to sail and row upon the Waters; joyning thereby the Inhabitants of distant Nations one to another; and to them we owe the Invention of Navigation, and the Improvement of it, for the benefit of Commerce, the first Merchants being found among them.

WITH these, therefore, we are first to converse in the Work before us, and I shall, in a few Words, bring them down to the Times, when these things were first attempted in the World, and then pursue their several Improvements, as they lye before us.

THE eldest Son of Canaan was named *Sidon*: The Family pursuing their Discoveries West and South, that is to say, into *Palastina*, and into *Arabia*, and I take the first momentous Discovery, they made as they travel'd Westward, to be that of the Sea.

As Sir *Walter Raleigh* wisely observes, tho' they went on Progressively spreading themselves upon the Face of the Earth, as their number encreased, yet they did not ride Post, nor go on like Travellers; and I add, that they rather proceeded like Planters, who spread gradually, farther and farther, as they found the Country too strait for them, and as their Cattle wanted Pastures, or as their Plow called for more Land, by the encrease of their People.

As then they had, at least, 460 Miles from the Land of *Shinaar*, where *Babel* stood, to the Coast of the *Mediterranean*, we may, at least, allow them to be thirty or forty Years, if not more, in spreading Colonies so far as *Sidon*, and clearing the Lands before them; for it is to be suppos'd, that the Surface of the Earth was generally made difficult to pass, by the over-growing of Woods in the upper Grounds,

and the over-spreading of Waters and Rivers in the low Lands, which they had Occasion to pass over; and that this greatly retarded their Journeying; However, otherwise, they might be forward enough to go on.

BUT tho', perhaps, *Ham* the Father, much less *Noah* the Grand-father, never saw the Western Coast of *Palastine*, yet 'tis certain *Canaan* the Grand-son of *Noah* enter'd into, and took Possession of it, and the Land it self was called by his Name.

HERE allow me to fanfy, for the Readers Diversion, that we could see the wandering Travellers, when from the tops of the Hills, call'd the *Libanus*, or *Anti Libanus*, (for there was the place) I say, when from the tops of the Hills, they first discover'd the open Sea, the great *Mediterranean Sea*, call'd, by way of Distinction, the *Great Sea*: How they started back at the sight; How they ask'd one another, in the greatest Surprise imaginable, *What it was?* What it look'd like? How Frightful in the Opinion of some; How Glorious in the Opinion of others; none knowing by any Means, what it was: Also how much more surpriz'd, when coming nearer to it, they could percieve that it was *not Land*, but *Water*; that it put an end to their Travels; and that when they came to the Brink of it, they could see no more Land, nothing but a vast endless Ocean of Water; and that Water subject to various Disorders, Storms, Tempests, &c. Suppose their Souls fill'd with Wonder and Amazement, they stand musing at the sight of it in Disorder, and showing what it was impossible to conceal, (*viz.*) that they thought they were now at their *Ne plus*, and could never expect to pass any farther.

WHEN they came to the Shore, they were again surpriz'd to see even the Sea friendly to them, and affording them a variety of Food, little inferiour to the

richest

richest Diet which God had bestowed before; in short; that it was most agreeable living in those Climates. Accordingly they resolve to prescribe themselves, as the Laws of Nature had prescrib'd them, not having the least Notion that the Water was Navigable, or what Navigation meant; much less, that these mighty Waters were appointed to be Subservient to the benefit of Mankind: They had heard indeed of the Ark, and of the Flood, which cover'd the whole Earth, but they had not seen either the one or the other.

WRAPT up in these imperfect ideas of Things, they sat down in the Land of *Canaan*; and if Occasion requir'd, that they shou'd extend themselves farther, they did it to the *South*, or the *North*, for farther Westward they could not go.

HERE they had room to look back, and consider the furious Element, and whether it was not a dreadful Enemy that they had escaped from in the *Deluge*; Here they had time to consider what was next to be done, for that a stop being there put to their travels they must alter their Course, and extend themselves some other Way.

BUT while they are considering what, indeed, they were next to do, *Sidon*, the eldest Son, tells them in so many Words, they may do as they think meet, but that as for him, he will fix his Standard just there, and the Borders of the Sea shou'd bound his Ambition; and accordingly, taking the Lands adjacent for his Patrimony, he built a City on the Verge or Bank of the Ocean, and call'd it by his own Name, *Sidon*.

In the mean time his Father *Canaan* taking Possession of the Inland Country of *Palæstine*, and extending Northward, into that part which was afterwards call'd *Syria*, seated himself, and his other Children, in that goodly part of the Country and there built, on the Bank of a very pleasant River,

another City, calling it after the Name of his Father *Ham*, *Hamas*, or *Hamascus*, now *Damascus*, which City is remaining to this Day; retains its antient Name, and that with the least alteration that is to be met with in any City in the World, and is, without dispute, the most antient City in the World; for even the Scripture makes mention of it in *Abraham's* time; *Gen. xv. 11.* where *Abraham* says, *The Steward of my House, is this Eliezer of DAMASCUS*; which saying of *Abraham*, was, according to Calculation, in the Year of the World 2030, or thereabouts; about 370 Years after the Flood.

WHILE *Canaan* thus built *Damascus*, his Son built *Sidon*, and thereby, with the rest of his Children, settled the several Nations of the *Canaanites*, and those which were after call'd *Phœnicians*; a Wife and Industrious People, as we shall see presently.

THE great Father of them all, *Ham*, the youngest Son of *Noah*, with his other Sons, *Chus* and *Mizraim*, and *Phut*, took the South-West Course, and spread themselves into *Arabia*, and into *Egypt*; where *Ham* himself erected his first Kingdom and reigned there, according to the most antient Authors, 161 Years; beginning his Kingdom 191 Years after the Flood; leaving his Grandson *Nimrod* the first, and most early Monarch, to be King indeed, but at first without a Kingdom, which he afterwards settled in *Assyria*, and *Arabia*; of whom, at present, we shall take no more Notice, tho' hereafter we shall have Occasion to speak of him again.



CHAP. III.

Of the beginning of Commerce, and Navigation in the World.

LET not our Readers imagine, from what has been said, that we shall entertain them only with the dry Subject of Antiquity, and amuse them with the History of the Worlds Planting: Tho' it be necessary to bring every thing on gradually, and from its Beginning, that the Chain of History may not be broken, yet the process of this Work will we hope not be so Barren of Entertainment to the enquiring Readers, as to tire them with the rusty Fragments of antient Times. The business of this Undertaking being then to give a true History of Discoveries and Improvements, and of them only I shall come immediately to the point, and leave the Original of Nations, as it really ought to be, quite out of the Enquiry.

HAVING brought the *Canaanites*, or Sons of *Canaan*, whom we are, from hence forward, to call *Phœnicians*, to the Sea Coast, and built *Sidon*, as in the last Chapter; you must allow that the *Sidonians* having but a small Territory by Land, and being an Observing, Diligent, and Improving People, if I may judge of them by what they were afterwards, I say you must allow them to be making divers little Enterprizes upon the Water.

THEY had never seen Boat or Vessel, or heard of any, or even of any Sea, except the Ark, and the universal Flood of Water. If any of them, by the Dictates of Nature, and the frequent Bathing themselves in the Sea, had learnt to swim, it might

might, for ought we know, be the only Testimony they had of the boyant power of the Water, and the Reason of hollow and empty Bodies floating upon it: And this by mere natural Deduction, as a Learned Writer suggests, was the first hint to them for making hollow Vessels to float, and consequently, to bear Burthens upon the Surface of the Water.

THERE was directly opposite to the Town a small Shoal, or Sand, which at low Water, seem'd to be an Island, lay Dry, and at some Seasons, upon a lower Ebb than ordinary, the Sea wou'd be so far sunk, as that they might wade to it; which Island was, it seems, after some time, rais'd, and taken in, to make a Mole, or Haven to the Town, and so was join'd to the Main-land: But this was not (I say) till some Ages, and the first Voyage, or Adventure by Sea, that these *Sidonians*, who were yet young in their Experiments made, was to this Island, which, at most, could not be above a Mile from the Shoar, of which presently.

To do this, the first invention of a Boat was set on Foot; and indeed it was a poor one, and does not come up to the Negroes of *Africa*, or Natives of *America*, who, before the *Europeans* came among them, had their *Canoes*, and *Periaguaes*, made of the Trunk of a Tree, hollow'd in the middle by the help of Fire, and so form'd without so much as any Iron Tool to work with; in which *Canoes*, or *Troughs*, for they were no other, they yet were seen sometimes off upon the open Sea, at a very great distance from the Shoar.

BUT the first Boats that we find they made, in these Countries, and by Consequence, in the whole World, for these were certainly the first that discovered the Sea, was a parcel of Osyers wreathed, and tyed together, then cover'd with broad Leaves of Flags, which grew in the Rivers there, and were very large
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and thick, and these again cover'd with the Skins of Beasts dried, which wou'd keep out the Water: They were formed into a shape, adapted for floating, or swimming on the Water, spreading them with Sticks thrust into either Side, to stretch them out, that so being kept hollow, they might swim, and be able to carry some Weight in them also.

HENCE the cross Pieces, placed in the same manner in a Boat, used now for the Rowers to set their Feet against when they Row, are at this time call'd *Stretchers*.

As these Boats could go but a very little way upon the Water, so they did not use to venture far in them; and usually, no farther, than that in case of a Disaster, they might swim to Shoar without them. And I suppose the first Voyage that ever was made in the World, after the Division of the Nations at *Babel*, was, as above, from *Sidon* to this little Island, being about a Mile in length.

NOR had the *Egyptians*, for a long time after, any other Boats than such as those, to cross the great River *Nile*, and even the Red Sea it self, as appears by those Lines in *Lucan*.

*Primum cana salix, madefacto vimine, parvam
Texitur in puppin, caesoque induta juvenco,
Vestoris patiens, tumidum superenatat amnem.*

THE principal use of these Boats, for many Years, were only to go a Fishing under Land, or along the Shoar upon any other small Occasion they had.

AFTER some time, as the acquaintance with the Sea made them bold, they made these Boats larger and stronger, till Invention still improveing, they bound larger Sticks together, and made yet larger Boats, and stronger; and then they adventur'd farther into the Sea, till as Fame tells us, some
Sidonian

Sidonian Fishermen going too far out in one of these Boats, a great Fish, not a Whale I suppose, because they are not ordinarily found in those Seas, but a great Fish, over-set, and over-turn'd one of their Boats, with six Men in it, who all swam safe to the Shoar.

UPON this Disaster, necessity calling for farther Assistance, the Inhabitants laid their Heads together, and made larger Boats, covering the Sides of them with thin Boards, and strengthen'd within by small pieces of Wood put together, and those Boards again being cover'd with Pitch, or a kind of Bitumen and Oyl, mixt together, to kept out the Water.

AND as they grew more us'd to the Element of Water, so they improv'd in the Art of Building their Boats, but we are assur'd, that they never attain'd to the Skill of giving Motion to their Boats by the Wind, and by the help of Sailors, till many Years after; and till the City of *Tyre* was built, which was not founded till some Ages after *Sidon*, and was a Colony of *Sidon*, being built, according to some Authors, 240 Years before the Temple of *Solomon*, which must be in the Year of the World 2783; but according to others, in the Year 1973, about 300 Years after the Flood, and 170 Years after the Confusion of *Babel*: For the City of *Sidon* was now large, and begun to spread it self upon the Coast every way, but especially, Northward, towards *Cilicia*, where they also built, or at least peopled *Tarsus*, or *Tarshib*, which was afterwards their *Arsenal*, or Magazine for building of Ships.

BEFORE the *Sidonians* built *Tyre*, they knew but little of the Sea, nor had they arriv'd to the knowledge of Sailing on the Water, tho' they had small Boats, as above, but that part was afterwards found out by the Citizens of *Tyre*.

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THE *Sidonians*, indeed, were grown Rich, Populous, and consequently Powerful by Land; but it was not the *Sidonians*, but *Tyrians* that invented the use of Sails, and taking the benefit of the Wind in their Boats, as we are assur'd by the Poet *Tibullus* in the following Line.

Prima ratem ventis credere docta Tyros.

Tyros taught first how Ships might use the Wind.

FROM such small beginnings, was deriv'd that glorious piece of Knowledge, which is now so admirably improv'd, and is so deservedly rank'd among, and esteem'd the most useful part of the *Mathematicks*, I mean *Navigation*; to what perfection it is since arriv'd, by what degrees it came to that Perfection, and how its greatest Advancement was reserv'd for the Honour of the present Age, will be, according to my Title, one part of the business of this Undertaking.

WE are next to understand, that in a few Years after the first settling of the Sons of *Ham*, in this Country, *Sidon* encreas'd exceedingly, whether from the pleasantness of its Situation, or the benefit of the Sea for Fishing, or that they soon began to correspond with their Neighbours, is not Material; but they grew so Populous, that finding a convenient Situation, not much unlike to *Sidon* it self, and at but about 14 Miles distance to the South, they sent out Families, as Bees do a Swarm, and taking Possession there, they began to build another Town, or City, and call'd it *Tyre*, from the Word *Zor*, or *Tor*, signifying a Rock; the first Town being built on a high Cliff, or Rock, on the edge of the Shore, having a very noble Bay, or Inlet of Water just under it, most admirably beneficial for Shipping, for securing them from all the dangerous Winds,

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which blow on that Coast, and which was, most certainly, directed by Heaven, who fore-knew the Occasion they would afterwards have of such a Harbour, tho' at that Time, the Builders were entirely Ignorant of the use of it, having no knowledge of Shipping, or Navigation, of any kind whatever, other than, I have already mentioned, in little sorry Boats, without Sails, without Rudders, scarce able to deserve the Name of Boats, nor had they any other, for some Years after.

THIS was the poor and despicable beginning of the Noble, and truly Glorious City of *Tyre*: The Beginner of Trade; the Mother of Merchants; where Commerce had its first Birth, and where all the Trade of the World center'd in a few Years after, and continued to do so many Ages.

TYRE, Whose Merchants were Princes, and whose Traffickers were the Honourable upon the Earth, *Isaiab* 27. 8.

TYRE, Whose Navigation spread its Fame into all Parts of the then known Globe, and some of whose Colonies became the most famous Establishments in the World.

TYRE, Whose People planted the Coast of *Africa*, to the Straits of *Gibraltar*, and built *Utica*, *Carthage*, *Leptis*, and several other Cities.

*Urbs antiqua fuit, Tyrij tenuere Coloni,
Carthago.*

Virg. *Æneid* lib. 1.

IN *Spain*, They pass'd the *Ne Plus ultra*, as it was afterwards call'd, of *Hercules Pillars*, and entering the Ocean, built *Cales*, then call'd *Gades*, and almost made a Colony of the whole Kingdom of *Spain*, for they possess'd all the Southern Parts of the Kingdom. In *Italy*, they built *Nola*, and several other great, and populous Cities in other Parts of the World: On
this

this Side; They traded with the antient *Armoricans*, the *Spaniards*, and even with the *Britains*, and from thence navigated all the Northern and Eastern Seas, where never Ships, or Barks, had sail'd before; and *on the South Side*, they traded with the whole Coast of *Afric*, in the *Mediterranean*, with *Arabia* and *Ethiopia*, in the Red Sea, and even afterwards to *India* it self, by the Straits of *Babelmandel*, now called the Gulph of *Mocha*, or the *Arabian Gulph*.

As here Trade and Arts began, and afterwards, being well managed, came to flourish; so in *Egypt*, where *Ham*, the Grand Patriarch of that Race, and in *Arabia*, where also his Posterity flourished, settled and became King. The Inhabitants fell to the Study of *Astronomy*, and the motions of the Heavenly Bodies, and made a great Progress in it, and in all kinds of Natural, and in some Parts of Experimental Philosophy, besides the wicked Study of *Magic*, *Astrology*, *South-Saying*, &c.

FOR as the People were all swallow'd up with Idolatry; the Devil was not idle among them neither; but as they run into the Study and Knowledge of *one Art*, he taught them *another*, while they innocently apply'd themselves to *one Thing*, he debauch'd their Fancy with *another*: Thus from the Study of *Astronomy*, he led them, as above, into the blind search after an Infernal Knowledge, by *Magic*, and divers Kinds of *Witchcraft*, *Divinations*, and *Conjurations*, *Necromancy*, and telling Fortunes, and the like: Hence, afterward, they came to Interpreting Dreams, which from the situation of the Country, was call'd *South Saying*, the *Arabians* being Inhabitants of all the *South Part* of the Country, between the *Persian* and *Arabian Gulphs*.

FROM hence, Idolatry encreasing, they came up to the Enthufiasme of the *Aruspices*, and the

Priests giving Answers by the Entrails of Sacrific'd Beasts, by the flying of Birds, and other Diabolical Practices, and as the Height and Perfection of all their Idolatry, to their Oracles, giving Answers at the Temples of their Idols, &c. But this is none of our present Business, I return to the early Discovery, as well of Arts, as of the Country, which Mankind made in the first Ages after the Flood.

As *Ham* and his numerous Offspring, discovering *Arabia, Palastine, and Egypt*, were thus busy, settling themselves West, and spreading farther and farther into *Afric*; so the Great *Nimrod*, Grandson of *Ham*, by his Eldest Son *Cbus*, made a very particular Discovery, namely, of the Art of Tyranny, and subjecting Right and Wrong to the Determination of Power. How he drew Mankind, who were born free, to embrace a Brutal Slavery, this we have but little light into in History, unless we may deduce it from the significant important Word, used for it in Scripture, (*viz.*) a *Hunter*, with this Emphasis, upon the Word a Hunter *before the Lord*, by which, as most of the Learned Expositors, and Annotators tell us, was meant a *Hunter of Men*; and so it imports, that *Nimrod*, being of a furious, bloody, tyrannick Disposition, first subdued a few by his mighty Strength, and then subjecting them, forced them to serve him in his farther Designs, to enslave others, till having thus gotten a Number together, ready to execute his Commands, and over-run others with Violence, under his Leading: He thus subdued Nations, and began Empire.

Thus he hunted down the weak helpless People, and set up a Kingdom under himself, till then unknown in the Word; for he broke the Rule of Eldership, and Paternity, setting aside the Patriarchal Kingdom or Empire, which ought to have remain'd in *Noah* (for he was still living) or
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at least in his Grandfather *Ham*, or his Father *Chus*, But despising all these, I say, he usurp'd the Throne, or Government and setting up for himself, erected a Kingdom of his own, bringing the rest of the Tribes into subjection to himself, and here began the blessed Discovery to the World call'd *Tyranny*, but this by the way.

THIS tyrannick Government encreasing, began the *Babylonish Empire*, and by him, was all the Country between *Palæstina*, or *Syria*, and the Rivers *Euphrates* and *Tigris*, planted, or rather subjected, of which again in its Place.

SEM, or *Shem*, the younger Son of *Noah*, and so named in the Text *Gen. x. 21.* went away into *Chaldæa*, being all the Country, lying on the lower Banks of *Euphrates*, on both sides, and reaching to the Gulph of *Persia*, and where the *Assyrian* and *Persian* Empires afterwards succeeded: hence *Abraham*, who was brought from *Ur* of the *Chaldees*, which lyes on the West Side of all those great Rivers, where they empty themselves into the *Persian* Gulph, and thence the Posterity of *Sem* extended themselves Eastward, also over all *India*, even to the Empire of *China*, and the Isles of *Japan*, the *Moluccas*, &c.

N. B. This I Observe, in Order to Note, that tho' the Language of all the Earth was divided, yet the Sons of the Posterity of *Sem*, retained their primitive antient Speech, which was the Hebrew which *Abraham* spoke, and his Posterity after him who were therefore call'd Hebrews.

JAPHET, in the mean time, and his Sons, especially *Gomer* and *Magog*, and *Madai* and *Javan*, spread themselves to the North, and planted, and peopled the Lesser *Asia*, and all *Europe*; and the
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Discoveries and Improvements they have since made there, we shall come to Enquire of in their Course.

Thus by the three Sons of *Noah*, as the Scripture says, *were the Nations divided in the Earth, after the Flood*, Gen. x. ult.



CHAP. IV.

Of the first Discovery of Shipping and Navigation, and of several Improvements made, during the most early Ages, next after the Phœnicians settling at Sidon.

TIRE was the Daughter of *Sidon*, and she dwelt so near her Mother, that they went on hand in hand in the Improvement of their Navigation, as well as of their Commerce: What mean and contemptible Things they began at, I have hinted in the former Chapter, and believe, I have shewn good Reason for what I have said, for it is evident that the *Tyrians* were the first of Sailors, tho' a great while after the *Sidonians* had the use of Boats. For *Tyre*, tho' a very antient City, was not Built till about 278 Years after *Sidon*: so that they had the use of Boats, possibly such as I have already Describ'd, and, perhaps, Canoes, Periaguas, and the like, above 300 Years before they found out the use of sailing with the Wind.

THE first step of Improvement, other than what I have already mention'd, namely of a Boat, and Oars, that is to say *Paddles* to give her Motion or WAY in the Water, was, as I find, by good Authority, the use of a *Rudder* or *Helm* to steer or guide the Boat, in her Motion from place to place.

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THIS, they tell us, was first learn'd from an Ingenious, or rather a Curious Observer of such Things, who took notice how a great Eagle, which us'd the Shore thereabouts, soaring, and as it were sailing aloft in the Air, in a calm Evening, turn'd her Tail from a Horizontal to a perpendicular or polar Situation, as she had occasion to guide herself this way, or that in her Flight; by which turning of her Tail, the Wind which always blows Horizontal, pushing against the Feathers, whose flat Side lay then towards it, forced the Tail forward, and that again turn'd the Body of the Eagle the contrary way. For Example, If the Eagle flew North, and the Wind blew from the East, the Eagle turning the flat Side of her Tail towards the Wind, and the Wind pushing the Tail, on that occasion due West, the Head of the Bird would necessarily be turn'd to the other way East: By the same Rule a Rudder to a Boat being caus'd to lye in the same posture in the Water, as the Tail or Rudder of the Eagle in the Wind, and push'd this or that Way by the force of a Man's Hand against the Water, wou'd necessarily turn the Head of the Boat the contrary way.

THIS method of Steering was for a very considerable Time, known only to the *Sidonians*, and that Knowledge purchas'd again, and perhaps Dear too, at first by the *Tyrians*; and what use did they make of it? indeed little more than to guide the small Boats they had, when they shou'd help them forward on their Way, and turn them this way, or that way, as their Occasion serv'd.

THUS Navigation was founded in Reason, and the Nature of Things, and discover'd by slow degrees, the Improvement being the effect of daily Experiment, and great Application, besides Hazards, and Difficulties, ay and Loss too; for as it is said of Physic, that the experimental Knowledge
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of the use and virtue of Plants, Drugs, &c. the *Materia Medica*, of which (all Physic is Compound-ed) has cost the World dear, by Poisoning many Thousands of its Inhabitants before the Practice arriv'd to the present Perfection. So I make no Doubt, that this *Sea-Knowledge*, as *Navigation* is rightly call'd, cost the World the Drowning many more Thousands of its People, before the Art of Building, Fitting, and Sailing, or Navigating Ships, arriv'd to the present Perfection.

AGAIN, as this Art, or Science of Navigation, is of inexpressible advantage to Mankind, so the Knowledge of it has been deriv'd from the most certain Principles in Nature, tho' it is Conversant in the two most uncertain Elements for its Performances, *viz.* the Wind, and the Water; but I come to the History.

IT was not many Years after the building of *Tyre* before, by the exceeding Conflux of People which from all Parts of the then known World flock'd thither, the Place became very populous, and still encreas'd daily.

THIS great Conflux of People brought on that mighty, and now, most important Thing call'd *TRADE*; which we have Reason to believe had also its beginning here, and of which I shall speak at large in the Process of this Work, I therefore only name it here to introduce this just Note, which is to my present Purpose, namely, *That Navigation was the Parent of Trade*, as Trade has always been the support and encouragment of Navigation: Trade had never been considerable without Ships, or Ships useful and valuable without Trade; in a Word, they are the mutual Supports of one another, and may be said to be conceiv'd and born together, by a mysterious Generation, Begetting one another.

HOWEVER, let them influence one another as they will, they are, *take them as Improvements and Dis-*

Discoveries, different in their Species. I am at present, to speak of the first.

THE first Voyage by Sea, which we are to suppose these new Adventurers made, was to the Island of *Cyprus*, which was an important Discovery, and the Climate being found agreeable, and the Soil rich, it became a Colony of the *Tyrians*, tho' it had been, as some think, peopled before from the Coast of *Cilicia*. Hence in return for their planting on this Island, they receiv'd the product of the Land, (*viz.*) such as the Inhabitants, by their Industry, caus'd it to produce, namely, *Wine*, *Oyl*, *Corn*, and other Goods, for the supply of the *Tyrians*, and their great City, which every Day encreas'd in People, and in Wealth.

SUPPOSE, by this Time the *Phœnicians* to be a great and mighty Nation, and the *Tyrians*, Inhabitants of this Coast, and the *Sidonians*, the first Merchants, extending their Commerce by Sea; For the doing this, they not only built Ships and Vessels, proper for their Business; but their Business encreasing, they employ'd the *Cilicians*, who inhabited the South Coast of *Asia Minor*, to build Ships for them, the *Cilicians* being better stor'd with Timber, and other Materials for Building. And this was the Rise and Beginning of the City of *Tarsus* or *Tarshish*, where the first Building Yards and Docks, as we now call them, are supposed to have been found.

IT wou'd be a Question worth Answering, if we could speak directly to it, what sort of Vessels or Ships, as they were call'd, the *Tyrians* and *Sidonians* at first made use of. But unless the Model of one of their Boats had been preserv'd, and could be referred to, no Man can speak with Authority to the Question.

IT is said, the first Builder of a Vessel for Sailing, was a *Cilician* of *Tarsus*, and that he took his
F draft,

draft or model from the Breast-bone of a *Swan*, which it may be observed, even now, is the exact shape of the bottom of a Ship; and that our Ships of War, or *Frigates* are built also after that same make; the breast or belly of a *Goose* or *Duck* is the same; which if critically observ'd has the very dimensions and proportions by which our Men of War are built.

I NAME the Men of War because they are, as our people call it, *built for Sailing*, and the Merchant Ships, or Ships of Burthen, tho' preserving the shape in the main part for floating or bearing upon the Water, have yet a greater breath allow'd for their carrying the greater Weight or Loading: But our *Frigate* built Ships are exactly form'd after the model of a *Swan's* Body: There you will find Nature working exactly for the occasion, giving that Creature all the suitable, and just proportions necessary to its condition, and to preserve it in the Element it was appointed to live in; and the Ship Builders were much in the right, they could not have a more exact pattern; there you will see the plain form of the Ship's Bow or Head, the Keel, the Rake, the Stern, and the Bearings, or Sides by which our Ships are formed, and the due proportions both of breadth and length.

DIRECTED thus by the wisdom of Nature, they had nothing to do but by the help of Art to form their work to the Model: This we may be assur'd was the work of Time, and that so much time, that even till within the reach of our Days, the Art of building Ships, as well as of navigating them in the Seas has been growing, and improving, and whether it may not still improve, I will not affirm; tho' it must be acknowledg'd, the present Age seems to have finish'd that part of Nature's work, and that it is not capable of any considerable addition; I say considerable, because the little alterations

tions in the upper-work ornament, and conveniences of Ships, which are daily chang'd like the Fashions of our Clothes, and which I may rather call alterations than improvements, are not worth naming in the Question; being not essential to the main end of Ship Building, I mean the Sailing, the bearing the Sea, Turning, lying near the Wind, Staying, &c. which the Seamen call the working of a Ship. These are the essential Articles of a Ship's usefulness; without them she is no more than a Trough in the Sea to roul upon the Surface, to lye and drive like the Hull when the Masts and Sails are down, or like a mere luggage Boat that is of use only to carry a Burthen, and not on any dangerous occasion. As to the Building, and carv'd Work, Painting, and Glazing, they are of little importance, but are, as I said above, frequently alter'd and chang'd by the Builders, as our Clothes are by the Taylors, and are peculiar to the Countries or Ports, or Fashions and Fancies of particular Workmen where the Ships are built.

BUT to come back to the model of the Ships built in those Days by the *Tyrians*, the *Cilicians*, and others, who were the first Navigators; it is most certain that at their beginning they were very rude, and imperfect, as well as incapable for their business; especially, if they came into any distresses at Sea; and therefore we find that for many Ages, as well by the insufficiency of their Building, as deficiency of the Navigators Knowledge, and want of the Compass or Magnet; the most of their Voyages were perform'd by coasting along the Shoar, the consequence of which was, that upon any threatening Storm, or any extraordinary swelling of the Sea, they always ran into the first Harbour they could come at, and in defect of such Harbour, or upon being blown off to Sea, they were

often stranded on the Shoar, or swallow'd up in the Sea with all that was in them.

THE manner of their Vessels, we may make some guess at by the description we meet with in Antient Writers, and in the pictures remaining of some of their Ships, where we find that Ships for War were always row'd by the Mariners, and Soldiers; some had twenty Oars in a Bank, or on a Side, some more, and had a Prow or Beak, as the Gallies have to this Day, but stood much higher; their Merchant Ships were built round, and turning up like a *Dutch Hoy*, and were exactly alike at either end, and thus to be sure was that Ship which the Apostle *St. Paul* was shipwreck'd in, as may be judg'd by their casting four Anchors over the Stern, and afterwards making a shew of casting more Anchors out of the Foreship, *Acts xxvii. 29, 30.*

As the shape and built of the Ship was the same in the Head as in the Stern, so the uses were the same, for they sail'd with either end forward as occasion required, and rode by the Head or by the Stern, as they found most to their advantage, having Anchors at both to ride by. This necessarily implies that they steer'd the Vessel not by a Rudder hung to the Stern-post, *as we now do*, which was turn'd by a Tiller, and a Whipstaff, as the Seamen call them, and used within the Deck, or by a Tiller only, when steer'd above the Deck; but by some piece of Wood like an Oar thrust out of a Port, or held out from the Deck of the Ship; and this might be done which end soever went formost, or if it had a Rudder, then there must necessarily be two Rudders, one before, and one behind, which is not probable, or they had a Rudder which was moveable and loose, and could be taken off and on, and so be hang'd either afore or abaft, as their Course requir'd; and this latter was certainly the

the case of the Ship *St. Paul* was in, for in the 40th Verse of the fore-quoted Chapter, he says, that resolving to run into a certain Creek, or in short, being in great distress, but seeing Land at a distance, they resolved to run *Bump'a-shoar*, so our Sailors term it, to save their Lives; the Apostle's Words are thus, Cap. xxvii. v. 40. *And when they had taken up the Anchors, and committed themselves to the Sea, they loosed the Rudder-bands, and hoised up the main Sail to the Wind, and made towards the Shoar.*

THIS loosing the Rudder bands must be thus, as they rode by the Anchors, before cast out at the Stern, they had taken off the Rudder from the *Stern-post* and had now hang'd it upon the Stem, which was become the Stern for the occasion; but now taking up the Anchors, and resolving to run the Ship on Shoar, they could not run her on Shoar with a Rudder hanging on the end which was to go foremost, which was the Stem, so they loosed the Rudder bands again, that is, unty'd it, and took it off, and then they went forward towards the Shoar.

AND this was plain also from the fourth Verse they run the Ship on Shoar, or a-Ground by the Head, which Head, or *fore part* stuck fast, but the Stern not being on Ground, *was broken in pieces*, as it must of necessity be by the violence of the Sea, the Ship having *broken her Back*, as our Sailors call it.

THESE things are so natural that they give us almost a full description of the Ship, which at the same time we must acknowledge, was a very poor inconvenient, and clumsy thing, compar'd to what we are arriv'd to the knowledge of making in these Days.

IN the next place we find that the Ship *St. Paul* was in, tho' it was a very great Vessel, for it had on Board, besides its Lading of Corn, 276 people, Seamen, Soldiers, and Passengers, yet had but one Mast, and if I guess right, had but one Sail neither,
or

or two at most, for Verse 17. he says, *Being afraid of the Quick-Sands they stroke Sail, and so were driven, or let her drive, as our People express it; that is, not being able to carry their Sail they lower'd the Yard upon the Deck; and this is agreeable to the manner of their sailing in those Seas, till within a very few Years past, when they carry'd no Top Mast at all, or but very small ones, but all their Sails lower'd at once upon the Deck if the Wind blew too hard to carry them out.*

THIS is the description which Reason gives of their Shipping, from the account which St. Paul has left us of his Voyage; and I believe you may take a just Idea from it of the manner of their building their Ships, as well as of their ignorance in Sailing in those Days, and yet those were Days when the Art of Navigation was wonderfully improv'd, compar'd to what it had been at the building of Tyre, or Tarsus either.

Now tho' this gives a sorry account of the Navigation of those Days compar'd to these; yet if we go back again to the times before that, as we must do, to form just Ideas in our Minds of the first improvements of Shipping and Navigation, we shall see that even with those small beginnings great Things were done, great Enterprizes were gone about, and great Things, not undertaken only, but finished. As,

- I. THE Navy of the *Greeks*, at the Siege of *Troy*, must be exceeding Numerous which brought the Armies of the several *Grecian* Princes, and Common-wealths, from the *Morea* or *Peloponnesus*, and other parts of the *Ægean* Sea to the *Hellepont* to form the Siege, which if the Chronology of those times is true, was above 432 Years before the building of *Rome*; I say it must be exceeding great, for the *Greeks* were an hundred thousand Men

Men at least. But then as Sir *Walter Raleigh* observes.

The Vessels were not great, for it was not then known how to build Ships with Decks. Vid. Raleigh's History of the World, lib. 2. cap. xiv. § 2. fol. 249.

II. THE Ships of King *Solomon*, which went to *Ophir* for Gold, supposing that *Ophir* to be the Island of *Sumatra*, or the *Philippines* in the *East Indies*, as some think; This from *Ezion Geber* in the *Red Sea*, was a very long Voyage, tho' even that Voyage was all perform'd Coast-Wise, and within sight of the Shoar.

III. THE several Voyages of the *Phœnician* Merchants from the same *Ezion Geber* in the *Red Sea* to the Coast of *Mozambique*, thence to the Cape de *Bon Esperance* or the Cape of *Good Hope*, and round the whole Coast of *Africa* to the Straights of *Gibraltar*, and so through the *Mediterranean* to the *Levant*, that is to say, to the City of *Tyre*.

IV. THE Navy of *Alexander* the Great, when he besieg'd and attack'd the City of *Tyre*, and took it, after a Siege of seven Months, which however, had he not block'd up their Harbour with his Ships he could never have perform'd.

THESE were great undertakings, considering the infancy of Navigation, and the ignorance of the most knowing Artists, for the *Phœnicians* were the best Navigators in the World without any comparison; and as they were the first, so they continued the most improv'd in the Art of Building Ships.

IT

It must be acknowledg'd also, to their Fame, they were bold Mariners, and that considering what indifferent Ships they had, without Decks, and consequently but ill furnish'd to keep the Sea; without conveniences to secure the Men, or to defend them, either from the rage of the Water, or from the inclemencies of the Seasons, covering themselves only with oil'd Canvass, or such as we now call *Tarpaulins*, and the like, as well to preserve themselves from Heat or Cold, and Rains, and Snows, as from the breakings of the Sea upon them, I say, all these things consider'd, they were bold Seamen to venture, tho' it were within view of the Shoars, for they were sometimes, without doubt, driven out of sight of Land, and as we may say, out of their knowledge, by Tempests, and Storms, and no question, were often foundred and lost.

AND after this, when they came to a greater perfection in the Building Art, as in the time when the *Carthaginian* Government flourish'd, they did great things. The *Carthaginians* were a Colony of the *Tyrians*, and inherited also their Spirit in propogating Trade and Navigation, they were exceedingly encreas'd by the multitude of the Citizens of *Tyre*, who by the help of their Shipping, fled from the *Assyrian* Monarch, as it may be said, in sight of his mighty Army, shipping themselves off with all their Families, and all their portable Riches, which was infinitely great, and transporting themselves first to *Cyprus*, and then to *Crete* or *Candia*, and thence to *Carthage*, *Utica*, and other Ports, where they planted themselves out of the reach of their barbarous Enemies, and afterwards grew into powerful Nations, States, and Common-wealths; I say the Citizens fled thence upon the famous attack which *Nebuchadnezzar* made upon the *Phœnician* Government, and particularly upon the City of *Tyre*, which

he

he took and utterly destroy'd; but as the Story says, found it entirely empty, and without Inhabitants, that all the Citizens who could get away before the City was blockt up by that furious Prince, with their Wives and Children, and their best Effects, fled away by Sea to *Cyprus*, and by Land to *Sidon*, making afterwards their more effectual escape by Sea to *Carthage*, where that City being originally a *Tyrian* Colony, they were receiv'd as free Citizens, and protected, as in Reason they ought.

THO' the *Affyrians* found some plunder; yet all the Gold and Silver, and all kinds of rich Merchandize of *Africk*, *Europe*, and *India*, which was in the City, was carry'd away by the flying Citizens, and was all convey'd to neighbouring Places by Shipping, and afterwards to *Carthage*, the value of which was immensely great, and was the enriching of that City, and finish'd its Glory also, by adding a prodigious number of People to the Citizens.

HERE, as I observ'd, the Spirit and Mettle of the *Tyrians*, their enterprizing Genius in Trade, and their particular disposition to Improvements and Discoveries in the World, continued and spread it self among the *Carthaginians*, who tho' they mingled with it some of their *Numidian* Barbarities and Customs, yet propogated Navigation, and the planting Colonies in distant Countries with the same Vigor as the *Phœnicians* of *Sidon* and *Tyre* had done before them.

THIS made them carry on their Commerce with *Spain* to an extraordinary degree, and as they had possession of the South parts of *Spain*, which the *Tyrians* had formerly planted and peopled, and now became subject to the *Carthaginians*, they built *New Carthage*, which flourishes to this Day, and is still call'd *Carthagenà*, as also *Barcelona*, and *Malaga*,

laga, Cales having been built before by the same *Phœnicians* from *Tyre*.

As the *Carthaginians* were thus establish'd, the Art of Building Ships, and the subsequent knowledge of Navigation, shifted Hands only, and removed from *Tyre* to *Carthage*, with this reserve in favour of the City of *Tyre*, that notwithstanding the utter ruine, which as before, the *Assyrian* Monarch brought her to, yet *Phœnix* like, she reviv'd out of her own Ashes, and recover'd a Lustre and Glory, yea, and a Strength too in several things, superiour to what she was before.

- I. F O R Strength, it infinitely exceeded what it had been, because warned by its former disaster, the Citizens re-built not on the same spot, but remov'd to an Island opposite to the old City, and which lay about a Mile, or something more into the Sea; so that taking up the whole Island with the plain of the new City; they seem'd to be naturally surrounded with the Sea, and thereby so fortify'd and secur'd that nothing could attack them. And,
- II. T H E greatness and splendor of their Buildings far exceeded what was before, and the City growing too great for the Island, spread it self to the Continent again, and consequently part of the old City was actually re-built also; so that when *Alexander*, who destroy'd it a second time, came to attack it, he found two Cities to dispute with, one upon the main Land, and one as it were in the middle of the Sea, and the Scripture says, *She was seated in the midst of the Waters*.
- III. T H E strength and riches of their Shipping infinitely exceeded what it was before, as the knowledge

knowledge of Ships, and the Art of Navigation was encreas'd and improv'd.

BUT their first disaster having, as I have observ'd, rais'd the greatness of the *Carthaginian* Empire, and establish'd the *Phœnician* Glory in the City of *Carthage*, the recovering of the City of *Tyre* did not at all diminish the *Carthaginians*, but rather encrease them; for the *Tyrians* Trading to the East by Land to *Persia*, *Palæstine*, and *Affyria*, and by the *Red Sea*, to *India*, and the Eastern Coast of *Africa*, by which all the rich Silks of *Persia*, the Spices and Gold of *India*; the Gums and Drugs and precious Perfumes and Ointments of *Arabia*, and in a Word, all the Wealth of the East was brought to the Port of *Tyre*; so the Trade between *Tyre* and *Carthage* grew so great, that the Shipping between the two Ports encreas'd to a very great degree, and, perhaps, was equal to all the Shipping employ'd by other Nations in the World.

THIS made the *Carthaginians* extend their Conquests far beyond what the *Romans* could do by Sea, and gave them infinite Advantages; the improvement of their Navigation was an improvement to their Power, and extended their Empire wherever their Ships could come; and in particular they possess'd the Islands of *Sicily* and *Sardinia*, the latter being, as I may say, at the very Gates of *Rome*.

As this greatness of the *Carthaginians* by Sea made them formidable to the *Romans*, so it put them upon setting up a Naval strength also, that they might be able to cope with this rival Commonwealth; and thus Navigation became the darling Study of the two mighty Empires: and tho' it is true that the mutual animosity propagated the Naval Knowledge no farther than as related to War, and to matching the Power of one another, in order

to Fight, yet it by degrees brought the *Romans* also into a love of the Sea, to launch into Trade, and to undertake new Discoveries, plant Colonies, encourage Merchants, and encrease Shipping; by which at last they not only over-power'd the *Carthaginians* at Sea as well as on the Land, but supplanted them in their Commerce also, and especially in *Egypt*; and the City of *Tyre* having been a second time entirely destroy'd, namely by *Alexander* the Great, the *Roman* Merchants of *Alexandria* carry'd a great part of the Trade away, which was before engross'd between the *Tyrians* and the *Carthaginians*; at length *Carthage* falling under the same fate by the *Roman* Sword, as *Tyre* had done by the Sword of the *Macedonians*, the Shipping also which was very much improv'd by the *Carthaginians* fell all into the Hands of the *Romans*, as the Empire of the whole World also did.

I CAN not say that the Genius of the *Romans* lay so much for Trade, and Discoveries or Improvements, as that of the *Carthaginians*, and the *Phœnicians* did, and therefore Navigation and the building of Ships, as also the Commerce of the World, rather receiv'd a Check for some time by the ruin of *Carthage*; nor did the *Romans* encourage Trade so much in proportion to their greatness as the other had done; for *Rome* was an inland Town, and the *Romans* were not inclin'd to Merchandize as the *Phœnicians* and *Carthaginians* were, or had been; consequently they did not at all encourage, much less improve the building of Ships, nor the making discoveries in the World, at least not for some Ages after that time.

HENCE the Cities of *Alexandria*, *Corinth*, *Syracusa*, *Utica*, and several others, which being Sea-Port Towns, and addicted to Trade, and for some Ages more independant than most other parts of the World, began to grow *Opulent*, and what improvement

provement the Shipping and Navigation of the World made for many Ages, was at those places ; but even those Cities themselves, notwithstanding they employ'd much Shipping, cannot be said to have added any thing to the knowledge of building Ships, or to the Navigation of the World ; but those things seemed to stand at a stay, and the *Romans* left the knowledge of the Sea, much where they found it.

SAILING was much the same, the best Navigators car'd not to go out of sight of Land, and if they did, their Pilots were generally the Stars and Constellations, such as the *North Star*, or the *Ursa Major*, *Ursa Minor*, the *Pleiades*, *Castor* and *Pollux*, and the like ; but if they came to thick hazy Weather, that they could not see the Shoar, and to cloudy Nights, that they could not see the Moon, or Stars, they were lost, and at their Wits ends.

AND yet the building of Ships was improv'd much more in this long interval, than the knowledge of Navigating them ; for after the declining and dividing the *Roman Empire*, when the Northern Nations began to spread themselves into the Maritime Countries, the *Gauls* at *Marseilles*, and the *Goths* in *Sweden* began to be strong in Shipping.

AFTER them the *Flemings*, and the *Easterlings*, as they were afterwards called, were the most powerful in Trade, and in Shipping also, of any Nation in *Europe*, or in the World : By the *Flemings* here, you must understand the whole *Belgia*, the Subjects afterwards of the Duke of *Burgundy*, containing all the Lower *Germany*, and that included the whole seventeen Provinces from the Town and Port of *Mardyke*, between *Dunkirk* and *Calais*, to the Mouth of the *Weser*, that is to say, to the City of *Bremen*.

BY

By the *Easterlings*, I understand the Northern Coasts of *Germany* in the *Baltick*, such as the *Dantzickers*, and the People of *Pomeran*, *Prussia*, and *Livonia*; those Countries which afterwards came to the *Teutonic Knights*, and where the *Hans Towns* principally began their Fame.

THIS part of the World being thus encreasing in Ships and Navigation, their power by Sea afterwards, shifted hands also, and came more into the People, nearer the Mouth of the *Baltick*, and on the *Elb*, such as to the Cities of *Lubeck* and *Hamburg*, the chief of the *Hans Towns*, under the powerful support of the *German Empire*, the *Teutonic Knights* being subdued: Their other chief Cities were *Bremen*, *Amsterdam*, and *Antwerp*, which with *Stralsund*, *Stetin*, *Koningsberg*, and *Dantzick*, in the *Baltick*, or Eastern Sea, made a very powerful Body, and being Cities of great Wealth and Opulence in Trade, became also the patrons of Shipping and Navigation, and sometimes struggled with several powerful Nations.

BRITAIN all this while had but a small concern among the navigating World; our greatest foreign Commerce consisted in exporting three Commodities, viz. our *Wooll*, our *Tin*, and our *Lead*; and this was carry'd no farther than to *Antwerp*, where was the *Staple*, as it was call'd, for our *English Wooll*; which to our shame, and infinitely to our loss, was manufactur'd by the *Flemings*, and the Goods when wrought sold even back again to us for our Cloathing, from whom the Materials for making them were first had.

IN all this Trade, we had but small use for Ships, and wherever the Art of Building Ships, or of Sailing in them, was carry'd on, it receiv'd but small improvement here. As the *Flemings* bought our *Wooll*, so generally speaking, they fetch'd it in their own Ships, nor had the *English* any

any store of Shipping till after the *Norman Conquest*, and till our Kings found themselves oblig'd to build them for the transporting their numerous Armies over to *France*; nay, even for that Service they generally hir'd Ships of the *Flemings*, having few of their own till the time of *Edward III.* and then there was not a number sufficient: But upon his invasion of *France*, he hired Ships of the *Flemings*, and *Easterlings*, for the chief strength of Shipping was found at that time among the Northern Nations. 'Tis true the *Danes*, and the *Saxons* alternately in their invasion upon this Country, and upon the Coast of *France*, had very considerable Fleets of Ships, which they coasted the Island of *Britain* with, and *Ireland* also; and that in the most early times of Shipping in these Parts: and yet even the *Saxons* at the first invasion of *Britain*, however they ventur'd over dangerous Seas, had but an indifferent Navy, if the Lines following are rightly translated from *Sidonius Apollinaris* quoted by Mr. *Cambden*.

Armorica the Saxon Pirates fear'd,
Who on our British Shoar in shoals appear'd,
And thro' rough Seas in Boats of Leather steer'd. }

It's strange what Ships these were, because we know that long before this Shipping was improv'd very much in the *Mediterranean Sea*; however, even there it was but a mean advancement neither, in our esteem, who are come to such a perfection in these Days; for tho' the *Phœnicians*, and *Egyptians*, and after them the *Romans* and *Carthaginians* had great numbers of Ships many Ages before the *Goths* and Northern Nations; yet they were not Vessels fit for the Navigation of these Northern Seas. If now and then a Vessel did come as far as *Britain*, which they did but seldom, they perform'd it with great caution and an infinite trouble, as well

as

as hazard, creeping along the Coasts of *Spain* and *Portugal*, and even rounding the deep Bay of *Biscay* to come to the Coast of *France*; and then hardly venturing over to the Shoar of *Britain* till they came into the narrow Seas or Chanel, where they could see the Land on both Shoars when in the midst of the Chanel, that is to say, not till they came within Cape *Ushant*, and perhaps as high as the Islands of *Jersy* and *Guernsey*, from whence taking the advantage of the flood Tides, they had an easy run to the Isle of *Wight*, or with the Tide of Ebb, they had the like to *Portland*, or *Tor-Bay*.

It is very remarkable too, that when any of those early Navigators had made this dreadful Voyage, for such they thought it to be, I mean the length of *Britain*, they had as much to boast and bragg of when they came home, as our Sir *Francis Drake* had afterwards, when the ignorant People us'd to say of him, that he *shot the Gulph*, that is, he went into the Gulph, or Bay of *Mexico*, and that he sail'd round the World; things which are now done every Day, and made as light of as the *Phœnicians* wou'd have made then of sailing from *Tyre* to *Carthage*, or to *Alexandria*.

WHAT strange Tales did their old Sailors tell of the terrible Island of *Britain*, and of the *Ultima Thule*, a poor Island among the *Orkneys*, which they dream'd was the *Elysium*, or dwelling of the Blessed; a Fable rais'd from the very grossest of all stupidity and ignorance. The Case was this, Some of the *Phœnician* Navigators being surpriz'd in the *British* Chanel with a storm of Wind at South-West, or perhaps at North-West (and it may be no extraordinary Storm neither, as we call Storms now) and finding the Sea grow dreadful, and the Waves mount high, frightened to be sure with the danger, and as they were neither by the
goodness

goodness of their Ships, or their Skill in working them, able to bear such a Sea; they often turn'd tail to it, and run away afore the Wind; being driven quite out of their knowledge, perhaps to the Coast of Scotland, or farther to the Islands of *Orkneys*, before they could put in for shelter. Many dreadful things (to them at least, and at that time too) befel them, among which, this was one, namely, that as they went farther and farther Northward, they found the Night shorten, and the Days of a surprizing length, and growing still longer the farther they went; till at length the Storm abating, and the Sea growing calmer, they put in, I say, among the Islands of the *Orkneys*, or thereabouts, and here staying for fair Weather they found that the *Solstice coming on*, there was no Night at all.

SURPRIZ'D with this unaccountable Phenomenon, of which their little *Astronomy* cou'd give no account, they concluded, that as by their going so far North they were come to almost a continued Day, if they went a little farther they shou'd come to *everlasting Day*, and that certainly the abode of the Gods lay that way, and the *Elyzium*, or heavenly Mansions, were not far off.

BIG with this Notion, they nam'd one of the Isles of *Orcades*, or *Orkneys*, as we now call them, by the name of *Thule*, a Word in the *Phœnician* Language, us'd for the place of Blessedness, or as some expound it, the utmost bound of human Life, and therefore call'd *Ultima Thule*. Had they landed upon this fine place they wou'd have had small occasion to think it any thing a-kin to the *Elyzium*; for all those Islands are miserably barren, cold, desolate, and the Coast dangerous: The last they allowed, as appear'd by this line of *Claudian*:

Ratibusque impervia Thule.

And *Thule* where no Ship durst ever steer.

Seneca also calls it the utmost boundary of the mortal station of Men.

Terrarum ultima Thule.

Thule, thou last brink of the spacious Globe.

Virgil, *Juvenal*, and almost all the Antients have Expressions of this kind, which they receiv'd from the more antient Authors of the *Phœnicians*, and they from their still more antient Mariners, who gave them the fabulous Accounts of these things; and they, *not for want of ignorance*, have handed them forward to us, who have by practice found it all to be empty, and foolish, nay even ridiculous; for our Ships steer not only to their *Thule*, but beyond it into the frozen Seas of *Greenland*, and *Nova Zembla*, where we see real Wonders, which they knew nothing of, and see also that their Wonders, which they made to be so terrible, have nothing in them.

THE improvement then of this particular part, (*viz.*) of early Knowledge and the Art of Building of Ships, is in it self wonderfully great, and that without any considerable relation to the Art of Navigation: It is true the well moulding and the shape of the Vessel, as well as the stability of the Building, is much concern'd in the navigating Part, that is to say in making the Ship sail well, lye near to the Wind, bear the Sea well, and the like; but adds nothing to the Pilot's skill in directing the Ship, keeping his Accounts, taking
his

his Observations; which are quite of a different kind from the Builders Art.

THE first Ships of Burthen that we meet with any account of from History were those of *Tyre*, call'd Ships of *Tarshish*: These were coeval in those parts of the World to *Nineveh*, as appears by the Story of *Jonah*; and it may be suppos'd they were consequently improv'd in the time of King *David*; as appears by that elegant description of a Storm in *Psalms* cvii. 23, 26. *They that go down to the Sea in Ships, that do business in the great Waters. They mount up to the Heaven, they go down again to the depths, their Soul is melted because of trouble.*

KING *Solomon*, after this, built Ships at *Ezion Gaber*, and sent them to the *East Indies*, certainly to *Ophir*, wherever it was; and it cannot be suppos'd but that they were large Vessels, considering the time they were out, as well as the length of the Voyage they went; for tho' it may be true that they only coasted along the Shoar, yet in some places they might be driven out to Sea a great way, as I have mentioned before in the case of the *Phœnicians*, in our narrow Seas; and no doubt they were so driven out to Sea very often.

ON the other hand, the biggest of these Ships, we find, made use of Oars; and even in *Augustus's* time the Ships of War were row'd with Oars; and yet not like the Gallies used now in those Seas, but very confusedly and irregularly plac'd: nor can the best Shipwright that I have consulted about it, (and I have critically enquir'd) conceive how they could make those Ships, as they call'd them, row with three or four banks of Oars, one above another, without making them most frightful in shape, and perfectly unfit for all manner of business; but the Word *Bank* seems to be wrong translated,

THE next thing to be observ'd is, that we never find any difference in the kinds of the Ships, which they made use of in those Times; but promiscuously they are all call'd *Ships*, for what business, or in what places soever they were made use of; whether in the narrow Seas, or in the Ocean, whether in Seas, or in Rivers. When *Semiramis* made her famous expedition into *India*, being that part which is now call'd the *Great Mogul's* Country, she was oppos'd by the *Indians* in the Chanel of the River *Indus*, with four thousand Ships: But as this must be even before the building of *Tyre*, or *Sidon*, or at least before the former, and consequently before any such thing as Ships were known in the World, so the most we can suppose of them is, that they were *Canoes*, or which was worse Boats made of Osiers, and Twigs, or Rafts, or some such trifling things as above.

A L L this intimates, that we are to make allowances for the times when we talk of *Ships*, and consider *where* too, as well as *when* the things mentioned were transacted; for example, the *Grecian* Armies went to the Siege of *Troy*, in a Navy of a thousand *Ships*; but what Ships they could be, we are left to judge, namely, large open Boats, merely made for transporting their Soldiers, in the calm *Weather* *Channels* of the *Ægean* Seas, among the Islands, where they had nothing to do but to row, or sail from one Island to another, always in sight of Land till they came to the *Hellepont*, in the entrance of which the City of *Troy* stood.

T H U S our Saviour is said to go into a *Ship*, in the fresh Water Lake of *Genesareth*, in some places call'd the Sea of *Tiberias*; and yet in another place it is said they were tir'd with rowing; also the Vessels used for fishing in the
Lake

Lake are frequently call'd Ships, which at best were only fishing Boats; perhaps such as we call *Peter Boats* to this Day, because they say St. Peter went a fishing with such, tho' I believe nothing of the Fable neither,

IN a word, *Ship* was then the common name for all Vessels, whether made use of to transport Goods, or Men upon the Water: But after a while *Ships of Burthen* were us'd to go upon the Sea, that is to say the main Sea, and those were call'd *Ships of Tarshish*, that is to say Ships of the *Sea*: *Tarshish* or *Tarsus* upon the Coast of *Cilicia*, and the shoar of the *Levant*, or *Mediterranean Sea*, being the first Town that built great Ships able to navigate those Seas. Thus Solomon's Fleet which he built at *Aifon Geber*, or *Ezion Geber*, are call'd Ships of *Tarshish*, 1 Kings ix. 26. Nevertheless the Port of *Ezion Geber* is in the *Red Sea*, or *Arabian Gulph*, which has no communication with the *Mediterranean*; and after all even these very Ships, if the particulars are examined, will appear to have been rather great burthenfom, clumsy, luggage Boats, than Ships, as we now understand the Word; nor were they qualified any more than their Sailors were skillful enough to undertake long Voyages in the great Ocean; which we now sail over. They were neither able to bear the mighty Waves, or the furious Storms which the Sailors, and the Ships of this Age go thorow, or to secure the Merchandizes from damage as we do. They had at first no Sails, for a long time; no Masts, suitable to the burthen of the Vessel; nor for a long time more, any Rigging adapted to the purpose of Sailing as now it is; in a Word, their Anchors, their Rudders, their Cables, their Shrowds, were all mean and poor, to what we see now made use of,

NEITHER

NEITHER their standing or running Rigging were tolerable, nor had they any such thing as Top Masts, and Top Gallant Masts, till since the improvement of the Art of *Navigation* by the use of the Compass; of which in its Course.

ON the contrary their Ships, like their Mariners, were heavy, ungovernable, unable to bear the Sea, and unqualified too. How, and by what degree they came to improve in Shipping, as well as in Navigation, we shall hear farther in its place.



CHAP. IV.

Of the first beginnings of the Art of Navigation, and its gradual Increase in the World.

IT is observable, that almost every Science, and every Art has a known Father, a Founder, an Author, or Inventor, as well as a Patron, and Encourager, at least nominally; so we name *Æsculapius* for Physic, *Atlas* and *Prometheus* for Astronomical and Geographical Knowledge, and the use of the *Sphere*; *Cadmus* the improver (I cannot allow him the inventor) of Letters; and so of many others: But of Navigation we find no Author, or Inventor named, or so much as suppos'd to be known in the World; it has been the product of mere Nature, led on by Reason and Necessity; the allow'd Parents of all new Discoveries.

THE *Tyrians*, as I have said, are call'd the Authors of the Navigation of the first Ages, and perhaps they were really so, for that part of the World; but that is giving the Honour to a Nation,
not

not to a particular Person; and other Nations might do the like. Some indeed tell us, that the Story of *Dædalus* having made himself waxen Wings, and flying with his Son *Icarus* from the *Cretan* Labyrinth, is only an allegory, and the meaning was this, (*viz.*) That *Dædalus* having contriv'd a Boat for his escape out of *Crete*, where he was condemn'd to perpetual Imprisonment, put off to Sea in his said Boat, and being discovered by the *Cretans*, he was persued by them in other Boats with Oars: That the *Cretan* Boats, having more Oars than *Dædalus*, gain'd upon him and wou'd have infallibly over-taken him, which he foreseeing had provided against, by the invention of a Mast and Sail, represented in the Fable by Wings made with Feathers fasten'd together with Wax, by which he flew over the Sea in the Air. This Mast and Sail being before hand fitted to the Boat, he set up the Mast in the middle of his Flight, and that being fixt according to Art, he suddenly hoisted up the Sail also, fitted to the Mast; then spreading it to the Wind, the Boat went on without the help of their rowing, and that much faster than it did before, to the great surprize of his Men: They that persued him were astonish'd to find that without making use of their Oars he flew from them as it were in the Air, and that his Sails were to him as Wings, so that they could by no means overtake him, whereupon they went back and reported that *Dædalus* had made himself Wings: The other part of the Fable is made good also the same way; for it seems his Son *Icarus* taught by his Father how to make a Mast and Sail for his Boat also, in which he was to attempt, the like Escape; the young Man too eager and desirous to sail the swifter, and withal not knowing so well the nature and reason of those Sails,

made

made his too large for the Boat, and hoisted them so high, that the Wind blowing fresh brought his Mast by the Board, or if you will, holding too much Wind, over-set his Boat; and so he was drown'd in the Sea of *Crete*, which bare his Name for a great while after.

THUS, as the Birds steering their flight in the Air dictated the use of the Rudder for steering of Ships, or Boats in the Water; so *Dædalus*, by his fertile Brain, invented the flying with Canvas Wings thro' the Seas.

IT is evident that the first Sails were made of Skins of Beasts, stretch'd out upon Poles, and extended with proper fastnings to either side of the Boat, like what we call the *Clue* of a Sail; from whence by Ropes fastned to the Boat, or Vessel, they were so spread as to be made useful to give motion to the Vessel, or Boat they belong'd to. But it was all at first no more than what we call sailing afore the Wind; they knew nothing of *Hauling Close*, *Trimming Sharp*, and lying near the Wind, and such Terms as we now practise by; but when the Wind was contrary, or not large to go away afore it, they lowr'd the Sail, and took to their Oars, and when they could not go forward by the help of their Oars, all they had for it, was to row in for the Shoar, and put into Harbour whereever they they could find it, and wait there for change of Weather: nor is it to be doubted, as I have observed before, but that many Lives were lost by the common accidents of Wind and Waves before the People arriv'd to skill sufficient to manage their Boats, whether by Sails or by Oars, I say many Lives were lost in Cases where now we find no dangers; for Example, many a Boat over-set for want of knowing how to tend the the Seas, so our Seamen call it, to handle their Oars, Steer steady, fill, or not fill, hand, or not hand

hand their Sails; in a Word, distress, and deliverances gave them Experience, and the Experiences added always to their navigating Skill; and thus one Age building upon the Knowledge of the Generation that preceded, they grew every Day abler for the Sea than they were before.

BUT with all this improvement, and with all the encrease of Knowledge the Antients gain'd in this useful part of mathematical Knowledge; nothing ever came so heavily on, or made so dull a progress as this of Navigation: For at the end of near two thousand Years practice, we find the height of their Improvement amounted to so little, that the meanest of our Mariners can sit and jest with it, in these times, of better skill; making themselves merry with it, as if their Ignorance was as much a wonder to us, as our Knowledge wou'd have been to them, had they been let into it in those Days.

How do we Read with a kind of astonishment, and at least with contempt, *the little*, which History gives us an account of about the Navigation of the Antients; even of those Ages, which compar'd to the antient *Phœnicians*, and *Grecians*, are to be esteem'd as improv'd, and advanc'd in the knowledge of Sea Affairs? How do our Sailors jest with these Nations? How do we call all ignorant Seamen *Paul's Mariners*, alluding to the account given in the 27th of the *Acts*, v. 29. of the Voyage of *St. Paul* from the Isle of *Cyprus* to *Malta*, where in their distress 'tis said they cast four Anchors over the Stern? How do we now ridicule the ignorance of the *Portuguese*, and of the *Genoese*, who yet were in those Days the skillfullest Navigators in the World, for their creeping under the Shores to reach from one Port to another, and for having no other knowledge of Navigation than the bare steering clear of Rocks and

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Sands,

Sands, when in their view, coming to an Anchor, or running into Harbour every Night, lest they shou'd be lost in the Dark?

THE truth is, the improvements of the Art of Navigation are extremely Modern, and rather more Modern than that of Building Ships; for till the knowledge of the *Magnet* or *Loadstone*, by the power of which, Men can, *as we may say*, see in the dark, and find their way by Night as well as by Day, out of sight of Land as well as in sight of Land, in Fogs and Mists, as well as out of them; I say, till then the navigating Skill was but small: and tho' Men had Ships of good bulk and burthen before, yet they knew little what to do with them when they came into these boisterous Northern Seas, and out of sight of Land. It is true, they ventur'd boldly, and perhaps more boldly than we do now; and as they grew more and more expert in the knowledge of Astronomy, they made use of the Constellations, and heavenly Bodies, to wit, Sun, Moon, Stars, for their guidance, and to shew them their way.

FIRST, we must allow them to have had right notions of the situation of Places, even before they had measured the Globe, and divided its Colures or Meridians into Degrees of Latitude and Longitude: But when they had so divided the Globe it was easy then to ascertain the distance of Places from the Equator, or from any given Meridian, so that the Latitude of Places was adjusted by the Geographers with great ease.

THEN for sailing out of sight of Land, when they did venture to do so, all the help they had was the Position of the Northern Constellations, whose circling Motions round the Pole being prescrib'd within narrower Limits than those more to the Southward, made them be as it were fixt to them; so that the *Ursa Major*, or the *Ursa Minor*,
or

or the Stars near to them, were as a *Pole Star* to them, because they were always to be seen within a known and equal distance from the *Pole Star* it self.

THESE Stars were their Guides in the Night when they ventur'd into the open Sea, as the Sun was by Day; but their difficulties lay when, in thick, hazy, or dark, and cloudy Weather, they had not the blessing of Sun, Moon, or Stars, for many Nights and Days together; then they were at a loss, bewildred, and frighted; and sometimes, *I may say oftentimes* lost for want of directions, falling upon Rocks, Lee Shoars, and high Cliffs, or covered Sands, having no knowledge of Places, and no Pilots, Charts, or Plans of Shoars to warn them of the danger; or Rules to judge of the distances, and to keep account of the Ship's way, as they do now, and so to cast up where they were, and how far from this or that Shoar, and consequently keep off from danger and destruction.

BUT let us look back to the wise Navigators of former Ages, well may I say, that they ventur'd boldly; for certainly considering the small knowledge they had of the Art it self, of Sailing, the small, and few, and insufficient helps they had for their directions in Cases of difficulty, it was most wonderful that they should undertake such Voyages as they did, and yet more strange, that they should perform them with success when they were undertaken.

FOR Example; To go back to the *Phœnicians*, and *Egyptians*, as small as their skill was in Astronomy, or as few as their Geographical improvements were, and as mean as their Ships were, yet we find that they attempted the following Voyages, and Discoveries.

- I. THEY coasted the whole *Mediterranean Sea*, from the bottom of the Straights, as we call it, namely, the Sea of *Phœnicia*, where their two Ports of *Tyre* and *Sidon* stood, to the Point, or Northern Head of the Straights mouth, call'd *Hercules Pillars*, and without unto the Bay where they built the City of *Gades* or *Cades*, which continues a flourishing City and Port of Trade to this Day.
- II. THEY fitted out Ships in the *Red Sea*, (*viz.*) at *Ezion Geber*, and from thence sail'd to the farthest part of the *East Indies*, (*viz.*) to the *Aurea Chersonnesus*, now call'd *Malacca*, and to the *Philippins*, from whence they brought back the Spices, and Drugs, and other rich Goods of *India*, and returning to the Port, now call'd *Sues* in the *Red Sea*, the Goods were carry'd from thence over Land to *Pelusium*, or *Damiata*, or else to *Alexandria*, both of them Ports in the Mouth of the *Nile*, whence again they were carry'd to all the Northern parts of the World by Sea; which Trade continued in the Hands of the *Alexandrians*, and since that of the *Genoeses*, and since they lost it, has been taken up by the *Venetians*, till within a few Ages that the *Portuguese* found out the way by long-Sea, round the Cape of *Good Hope*,
- III. THEY sail'd likewise from the same *Ezion Geber* to the Coast of the *African Ethiopia* in the same *Red Sea*, and from thence following that extended Shoar due South, along the Coast of *Zanguebar*, *Mosambique*, *Melinda*, *Monomotapa*, and *Natale*, they doubled the Cape of *Good Hope* it self, and seeing the Sun both to the South of them, and to the North of them, and then to the

the South of them again, they pass along the Coast of *Congo*, and *Angola*, the *Gold Coast*, and the *Grain Coast of Guinea*; and continuing an unwearied Progress, pass'd the *Cape Du Verd*, *Cape Negro*, and *Cape Blanco*, till they came to *Cape Spartel*, in the Mouth of the *Straights*, where entering they reach'd their own Colony of *Carthage*, and thence on to *Alexandria* in *Egypt*, near the place whence they first set out.

We are well assur'd from Authors of good Authority that the *Phœnicians* performed all these Voyages, and in particular the last; and indeed they were bold Fellows in doing so, considering that besides the difficulty of the Coasts in several places, it is very probable many of those remote Countries were not yet inhabited in those early Times, and so soon after the confusions of *Babel*; In particular the South, and West parts of *Africa*, might be suppos'd to be yet unknown, and the posterity of *Canaan*, who first possess'd *Egypt*, and spread themselves early, and chiefly along the Shoar of the *Mediterranean* into *Libya*, and that which we now call *Barbary*, and perhaps afterwards into *Abissinia*, or *Ethiopia*, shou'd be some Ages before they wandred over the scorching Sands of *Zanguebar* on the East, or the burning Coasts of *Congo*, and *Angola* on the West, so to inhabit as far as the Cape of *Good Hope*, and the Country of *Monomotapa*; and if those Countries were void of Inhabitants, by consequence they would be empty of Provisions for the relief of the *Phœnician* Seamen, when they shou'd arrivet here.

BUT be that how it will, we are, I say, assur'd they did sail that way, and whatever benefit they made of it did frequently put into the Harbours, and Ports upon those Coasts for shelter, at least, if not for relief; nay, one relief we are assur'd they must

muſt not only often put in for, but go on Shoar to procure, and that is *freſh Water*; nor could they continue long at Sea (in *theſe hot Climates eſpecially*) without a frequent ſupply of it. What ſkill they were arriv'd to, in making Casks to put and keep Water in, is hard to know; we have ſome Reaſon to think that earthen Jarrs, and Bottles, were the beſt reſervators they had; and of thoſe as their Ships could not ſtow a great many, ſo neither could they hold any great quantity of Water at a time, ſo that they muſt go often on Shoar, and into Ports to recruit.

THOSE who underſtand this coaſting way of Navigation, and eſpecially the dangerous Shoals and Rocks, which lye at the entrance into moſt of the great Harbours and Rivers in the World, know alſo, that nothing is more hazardous than to go into ſome of thoſe Rivers and Harbours without the help of Pilots, and the direction of Boats to ſound the depth before them, to find good Ground for Anchor hold, good Riding from Winds, and Currents, ſo to prevent running on Shoar, and ſtranding on the Beaches and Sands, or ſtaving on the Rocks, upon any ſtreſs of Wind that might blow.

As the dangers were not leſs in thoſe times, ſo the advantages and ſkill which the Navigators had to avoid thoſe dangers, were not more or greater than they are now, but a great deal leſs; particularly for want of Pilots, and of good Anchors, and of Cables, and indeed of good Ships or Veſſels; ſo that all conſidered 'tis ſomething wonderful that ſuch long and uncertain Voyages could be perform'd at all.

AGAIN, we are aſſur'd that even in thoſe Voyages, tho' they coaſted *along Shoar* (as we call it) and kept as much as poſſible in ſight of Land, yet that they had ſeveral Gulphs to paſs over, and the mouths of great Rivers to croſs in, which they

they must needs go out of sight of Land to cross them, the strength of the Currents not admitting them to go up into those Rivers; as the great River of Congo in the Southern Guinea, for Example; and the *Rio Grand*, and *Rio de Senegall*, near *Sier-ra Leon* in the Northern Guinea; in some of which the openings are twelve to sixteen Leagues over, so that they could never see over from side to side; and in such places if the Weather was thick and hazy, the hazard wou'd be greater than ordinary to those Navigators who had no Pilots to direct them, and who knew nothing what they had to expect before them, or how broad those openings might be, nay, they could not always know whether there was any Land beyond them or not.

IN like manner those Navigators who went to the East, and made that long Voyage from the Red Sea to *Ophir* in the *Indies*; especially if that *Ophir* be (as we understand it to be) the Island of *Sumatra*; they had many dangerous Apertures which they could not see over, and must venture hard to pass; as for Example; from the Mouth of the Red Sea, which we call the Straights of *Babel-mandel*, or as our Seamen call it, the Gulph of *Mocha*, they steer'd away East, keeping the Shoar of *Arabia Felix* on the Larbord side, till they came to the Mouth of the Gulph of *Persia*; It can hardly be suppos'd they went into the bottom of all that Gulph, on the *Arabian* side, which is above three hundred Miles North up to *Bassora*, and then came about again South, on the *Persian* side to *Gomevon*, and *Ormus*.

BUT I will suppose they had so much knowledge of the Country as to know that great Inlet call'd the *Persian* Gulph, was no more than a Gulph or Inlet, and that they were to cross over it to the other Shoar, namely, to *Guzeratte*, and then coast away South along the *Indian* Shore to the Island

Island of *Ceylon*, and round that vast Island into the great Bay of *Bengale*; in doing this also, they wou'd have a vast opening between the Point call'd *Diu Head* or Point *Dant*, being over the mouth of the great River *Indus* to *Surat*, and then again between Cape *Comaroon*, the utmost Point of the main Land of *Malabar*, and the Island of *Ceylon*; the passage indeed between might be passable, if their Vessels did not draw much Water, but dangerous if they did, and even unpassable as it is now. Again, they wou'd have had a long and difficult stretch from Point *Pedro*, the Northermost Land on the East side of *Ceylon* to *Callimere*, the most Southerly point of Land on the Continent of *Coremandell*; from thence supposing them to have made the Shoar, they wou'd have a long stretch into the bottom of the Bay, on the East side, along the Coast of *Coremondell*, and then another opening with a deep Bay, about twenty five Leagues broad at the mouth, from *Gardeware* to *Pawrarya* in the Kingdom of *Golconda*; after which coasting the Bay of *Ballasome*, and the Country of *Bengale*, at the mouth or mouths rather of the great River *Ganges*, they wou'd have the like openings to cross over, which they could understand nothing of, unless directed by Pilots of the Country, which 'tis doubtful whether they could have at all, or at least wou'd very rarely find in those early Ages of the World: the crossing the mouth or rather innumerable Mouths of the River *Ganges* taking it from the first Point North-East of *Pipley* to the Coast of *Nettingham* or *Bengale Proper*, which is all the bottom of the Bay and is at least one hundred Leagues over, is what I can entertain no notion of considering the people we are talking of.

How then, these Navigators could pass all those difficult places in such Vessels, as we have Reason to believe they sail'd in, and with no better

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ter skill in Navigation, than they had at that time, is very hard to judge: That it took them up a very great length of time to coast all those unknown Shoars, and to stop, and put in so often, as *no doubt* they were oblig'd to do; this we know, and have spoken to already, and this confirms me in the enquiry after the manner of their Sailing; for unless they had thus coasted about, how could they be three Years in performing the Voyage? 'Tis certain that our Ships wou'd now go the same length, that is to say from the Mouth of the *Red Sea* to the Island of *Sumatra*, and back again in less than six Months, or thereabouts, one time with another.

THIS was the State of the World in the infancy of Navigation; and so mean a thing was Navigation it self, before they got farther lights, and helps into it. Let us see how they carry'd on their Affairs in the Discoveries of those Days, and what advantageous Improvements they made for Years after this.



CHAP. VI.

Of the early Discoveries of the first Ages, and how they became acquainted with foreign Countries.

IF I must enter into an enquiry after new Discoveries from the beginning, I must trace the several Sons of *Noah* from the Ark to the Plains of *Shinaar*, and the building of *Babel*; and must then follow them into all the several Quarters of the World, and give a History of their peopling the Earth, and whether they travel'd for fixing their

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ter skill in Navigation, than they had at that time, is very hard to judge: That it took them up a very great length of time to coast all those unknown Shoars, and to stop, and put in so often, as *no doubt* they were oblig'd to do; this we know, and have spoken to already, and this confirms me in the enquiry after the manner of their Sailing; for unless they had thus coasted about, how could they be three Years in performing the Voyage? 'Tis certain that our Ships wou'd now go the same length, that is to say from the Mouth of the *Red Sea* to the Island of *Sumatra*, and back again in less than six Months, or thereabouts, one time with another.

THIS was the State of the World in the infancy of Navigation; and so mean a thing was Navigation it self, before they got farther lights, and helps into it. Let us see how they carry'd on their Affairs in the Discoveries of those Days, and what advantageous Improvements they made for Years after this.



CHAP. VI.

Of the early Discoveries of the first Ages, and how they became acquainted with forreign Countries.

IF I must enter into an enquiry after new Discoveries from the beginning, I must trace the several Sons of *Noah* from the Ark to the Plains of *Shinaar*, and the building of *Babel*; and must then follow them into all the several Quarters of the World, and give a History of their peopling the Earth, and whether they travel'd for fixing their

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Habitations, because every new Settlement might then be call'd a Discovery and a Plantation : But as this wou'd be a fruitless, as well as tedious Subject, and wou'd take up this whole Work, without either Diversion or Instruction to the Reader : I leave it, as it really is remote from my Design.

BUT stepping forward some Ages from the separation at *Babel*, we find in about three hundred Years, the World pretty well peopled, the Inhabitants possess'd of the greatest Part of it, and infinitely multiplying in People; Those People daily spreading themselves farther and farther, for new possessions. The Sons of *Cham* possess'd the East of *Afric*, and the Western parts of *Asia*, such as *Arabia*, and *Syria*; the Sons of *Sem* were possess'd of all the East of the vastly extended Country of *Asia*, even to the utmost parts of *India*, and *China*; and the Sons of *Japhet* the Northern parts of *Asia*, and all *Europe*, call'd in Scripture the *Isles of the Gentiles*.

IN this situation, the *Phœnician*, [*Sidonians*] and *Cilicians*, being the first Nations situated upon the Sea-shores, as I have observed already, first contriv'd the building of Boats, and then larger Vessels to float upon the Water; then Ships and other Vessels, which they call'd *Ships*, and then Sails to make use of the Winds and Seas in those Ships, and to guide them from place to place, and this we call Navigation; after the *Phœnicians*, the *Egyptians*, and after the *Egyptians*, the *Grecians* fell into the same practice, and thus the Art of Navigation was introduc'd in the World.

THE Art being thus obtain'd, or at least begun, the Uses of it are our next enquiry; and this was in short of two Kinds.

- I. To make and maintain an intercourse or communication of Nations by Water, and to bring them

them acquainted with one another, which was the Original of Trade.

II. To seek out new Discoveries, and plant their own people in Colonies, and Settlements in remote Countries, which were yet uninhabited, and divided from them by the great Waters, so as they could no otherwise come to the knowledge of them, much less the possession; and this is the part which comes within the compass of, and indeed constitutes this Undertaking.

THE first communication for Commerce, which the *Tyrians*, a People naturally inclin'd to Merchandize, were said to make was with the *Egyptians*, who lying on the same Coast in the Gulph, or Bottom of the same Seas, were at first easily reach'd by the help of small Boats, and other Vessels, rowing along the Shore; the communication by Land being also made long before.

IN like manner the *Sidonians* went North, and joyn'd their Possessions to the Sons of *Japhet* in *Syria*; and by the same Seas soon reach'd the Shores of *Cilicia*, where they built *Tarshish*.

NAVIGATION, being thus begun in these three Parts of the World, to wit, *Phœnicia*, *Egypt*, and *Greece*: We are now to see what use they made of it; to what Improvement it guided them, and what Discoveries they made in the World by the help of it; as also, how the Art it self, and all the subsequent Branches of Sea-knowledge, which we see the World since arrive to such perfection in, grew up gradually upon the foot of this first, and fundamental part of Science.

THE first Discovery the *Phœnicians* made by virtue of their Sea-knowledge, was the Island of *Cyprus*, which tho' they found peopled from the opposite Shoar of *Cilicia*, and that there were

Some few Inhabitants upon it, who subsisted themselves, and did as it were but just live, and that in a wild and undirected manner, maintaining themselves by the natural product of the Soil, *which was very rich*, yet they were first civilized, and taught to live comfortably, and like Men, by the more polite and improv'd *Phœnicians*; who finding the Country fruitful in Corn, Wine, Cattle, and especially Cotton Wooll, which they soon found the value of, they came over in great Numbers. with their Families, and settled on the Eastermost part of the Island: There they built the Towns, or Cities of *Nicosia*, and *Famagusta*, as they are called now, and in a Word, peopled the whole Island; they built other Towns, no question, the Island being full of Towns, but these are the chief.

HERE the said *Phœnicians*, People, I say, naturally Industrious, and addicted to Commerce, erected the first Woollen Manufactures, which we meet with in any of those parts of the World; that is to say, a Manufacture of Cotton Wooll, which in those early Times, they brought to great perfection: and afterwards it spread into *Phœnicia* it self; the Cotton Wooll, which was the Fund for the Manufacture being supply'd from *Cyprus*, where it was the natural growth of the place.

N. B. *This growth of Cotton Wooll is still preserv'd in the Island of Cyprus; and tho' the Turks, who are naturally inclin'd to discourage Industry, and encrease of People, and of Commerce, do not carry on much of this Manufacture there, yet the Cotton Wooll is carry'd from thence into all the Countries round, and especially into France, Italy, and the Venetian Territories; and some is brought even to England it self, where it is manufactur'd in an extraordinary*

nary manner; as also in Holland, Germany, and the Austrian Netherlands.

ENCOURAG'D by the success of this first Discovery; we find the *Tyrians* or *Phœnicians* afterwards pushing their good fortune, and planting themselves in the next place upon the Island of *Crete*, now call'd *Candia*; and here they built *Canea*, and several other Towns on the Sea-coast, and peopled them with Inhabitants from their own Country: this, besides the Concurrence of History is confirm'd, in that the *Cretans* not only spoke the Language of the *Phœnicians*, but also for that their Customs, and especially their *Idols* were for some Ages the same.

THE antient Writers of the first Ages of the Heathen World, will have *Mercury* to be the first Author of Navigation, and that the Wings which the Antients give him in his *Hat*, and his *Heels*, are Emblems of his teaching Men to fly, that is to sail upon the Sea: Others tell us it was invented by the *Egyptian* God *Tboyth*, which is the same as *Mercury*, and who some will have to be the antient *Termegistus*; others *Moses*; That *Danaus* made a Voyage from *Egypt* to *Greece* in a Galley of his own inventing; others that *Edom* or *Esau*, *Jacob's* elder Brother, having spread his Dominion over the Western *Arabia* first seized the Banks of the *Red Sea*, and taught his Posterity how to build Vessels, and sail upon the Sea; and that they us'd to rob the *Egyptians*, he himself commanding them in Person; so that they make *Esau* a great Pirate, even before there were any Ships or Boats to act Piracy with, much less any to act Piracy against: All these things I look upon as Fables of the old Times, and written without any sufficient Authority; as I do also the account of the *Egyptians* trading to *India*, and to the Coast of *Ethiopia*,
and

and *Zanguebar*; in times so early, as that we know the very Country of *Egypt* it self, tho' very soon planted, or possess'd rather, yet could not be fully peopled at that time.

To return therefore to the most early times of Navigation, such as the first Discovery of the Islands of *Cyprus* and *Candia*, by the *Phœnicians*, no doubt the possessing those two Islands, was a great accession of Power to the *Phœnicians*, as they rais'd great Tribute from them, and receiv'd great supplies of Corn from them, which at that time (the Cities of *Tyre* and *Sidon*, being so much encreas'd in People) was very much wanted there.

WE cannot doubt, but that both of those Islands receiv'd a great addition of People also from the *Phœnicians*, who were all *Canaanites*, when *Josuah* at the Head of such a powerful Army, as that of *Israel*, invaded the Land of *Canaan*; and as we can not question but that great numbers of People fled away for their Lives upon the first Irruption of the *Israelites*, nay even before that Irruption, hearing of their approach, and of their Victorious carrying all before them, on the other side *Jordan*; and especially upon the defeat of the Kings, which first oppos'd him: I say we cannot doubt but such of the People as could flee away with their best Effects, did go as Nature dictates, and as is the practice in like Cases to this Day; no doubt but this flight too was with the utmost precipitacion, some one way, some another; some over the Mountains of *Libanon*, into the utmost parts of *Syria*, and towards *Damascus*, some to the Sea-side to *Tyre* and *Sidon*; and not thinking themselves safe there, they took Shipping again, and went away to *Cyprus*, to *Crete*, and to *Italy*, and even any where, *Ubi fata vocant*, wherever they found they could be safe.

THIS

THIS we have a proof of by the Pillar said to be set up upon the Coast of *Barbary*, not far from *Tangier*, which had this Inscription,

We are they who fled from the Face of JOSHUAH the Robber.

No wonder then if the Multitudes, who thus fled for their Lives, seated themselves, as I have said, *among others*, in those two large, fruitful, and pleasant Islands of *Cyprus* and *Crete*.

To confirm the probability of this, History assures us, that at such time (many Ages after this) when *Nebuchadnezzar* the Great, the same who sack'd and burnt *Jerusalem*, and the Temple there, lay'd Siege to the City of *Tyre*, and that the Citizens saw they were not able to beat him off, or to avoid falling into his Hands; they assembled all their Ships together of every sort and size, and after beating the *Babylonian Fleet*, which block'd them up by Sea, and which tho' it consisted of three-score Ships, the *Tyrians* overthrew with twelve of theirs; I say, that having thus beaten, and destroy'd the Enemies Ships, they ship'd off all their Riches, and Treasure, their Goods, and Merchandizes, and every thing that was portable, and sent it over to the Isle of *Cyprus*, to their Colony there, and then (the Ships returning) they embark'd themselves also, Men, Women, and Children, and went away after them, even in sight of the *Assyrian Army*; leaving them a naked, empty, and uninhabited City; so that the *Babylonians* being disappointed, and enrag'd, turn'd their Army upon *Egypt*, of which the Scripture gives an account; and Sir *Walter Raleigh* says, God Almighty seeing his Servant *Nebuchadnezzar* disappointed of his hop'd for plunder, the reward of his undertaking, and resolving he shou'd not under-
take

take such a great Expedition for nothing, made him amends by giving *Pharoah Necho* into his Hands, and giving him the plunder of the great and rich City of *Memphis* in *Egypt*, which he took and destroy'd.

IT is a Question in matters of Commerce, whether the destruction of *Tyre*, by *Nebuchadnezzar*, did good or hurt. If I may give my opinion, I think it was rather good than harm; for tho' it is true, that the Citizens had a very great loss in the demolishing their Houses, and ruining their public Edifices; yet as it scatter'd a diligent and useful People into divers parts of the World, where they settled immediately to business, some in one place, and some in another: They were as so many Instructors to the Nations wherever they came, to pursue the same Industry, and maintain themselves by Trade, which before, 'tis very likely, they knew little or nothing of.

ON the other Hand, as the trading part of the Citizens went off with their Riches, their Merchandizes, and all their Wealth, and above all, with their Ships, they were, except the hurry of their Flight, in as good trading Circumstances as before, and so established a general Correspondence and Commerce wherever they came.

AND both these Articles, (*viz.*) their Industry, and their Wealth was such a support to them, that after setting all the People upon business wherever they came, the *Assyrian* Conqueror was no sooner gone but they return'd to *Tyre*, re-built their City, and in a few Years it became greater, richer, and more powerful than ever it was before.

F I N I S.

A GENERAL
HISTORY
OF
DISCOVERIES
AND
IMPROVEMENTS,

In useful ARTS,

Particularly in the great Branches of
COMMERCE, NAVIGATION, and
PLANTATION, in all Parts of the
known WORLD.

A Work which may entertain the CURIOUS with
the view of their present State; prompt the in-
dolent to retrieve those Inventions that are neg-
lected, and animate the diligent to advance and
perfect what may be thought wanting.

To be continued Monthly.

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Business; all the eager desire to improve in Knowledge, and encrease in Power, which the *Phœnicians* themselves were so famous for, and particularly, their thirst for Improvement by new Discoveries, planting Colonies, and peopling new Worlds in parts unknown; all this has been toucht at already, and in part describ'd.

It cannot be doubted but that all the great Cities and Towns, and especially Sea-Ports, of which many remain, and the ruins of many more are to be seen on the North Coast of *Africa*, from *Tunis*, which was near *Carthage*, if not part of it, to Cape *Spartel*, and thence on the West Coast to Cape *de Verd*, in the Latitude of fifteen Degrees, and perhaps farther, were originally of *Carthaginian* foundation; and that the Commerce settled in those Towns was also very great and flourishing during the continuance and prosperity of the *Carthaginian* Government, who went on with great Success, and a high Hand, extending their possessions in *Africa* to such a length, as no succeeding Powers have thought fit to meddle with after them, and no doubt but they found an infinite advantage of Wealth from them, as may be judg'd by what still appears.

THAT the *Carthaginian Empire* was overthrown by the *Roman* in the last Punick War, and the City of *Carthage* it self destroy'd, all the reading part of Mankind very well know; and it is none of the business of this Undertaking to enter into any account of it; but thus far is necessary to our present purpose to observe, (*viz.*) That tho' the *Romans* were great encouragers of Learning, and of Arts and Science, as in particular of Eloquence, of Poetry, and many useful and civilizing parts of Knowledge; having the greatest Poets, and Orators, and Statesmen, and Generals, flourishing under the protection of their Govern-
ment,

ment, that ever the World saw; yet their Genius did not lye to Trade, to discovery of foreign Countries, or settling Colonies for Commerce, in new-found and remote Places; nor did they encourage Navigation and Plantation, or erect Manufactures, for the ends of Trade, as the *Carthaginians*, and *Phœnicians* had done before them.

FROM hence it follow'd, that with the fall of the *Carthaginian* and *Phœnician* States, all the most promising and prosperous Discoveries they had made sunk back again towards their original Obscurity: The People, who had been settled in them, not receiving supplies from their Government, or from their private Correspondents in *Carthage*, as they usually had done, and as was necessary to support the Plantations they had begun, either starv'd or perish'd for want, or were oblig'd to abandon the Settlements they had made; a thing we may almost remember to have been the fate of several of the first Planters in the Northern *America*, even by our own Nation, tho' no public calamity at home prevented a Supply; as particularly at *New England*, *Virginia*, *Bermudas*, *Darien*, and several other Plantations, in those parts of the World.

THUS the *Goths* and *Vandals*, who succeeded the *Romans* in the Government of *Africa*, and who still pursued rather a military Possession or Conquest of the Country already settled, than an extending the Commerce for the improvement of Navigation and Plantation in remote Countries; I say, these *Goths* and *Vandals* left the said discovered Countries under the same neglected, decayed condition in which they found them; or rather in which they were, for we can hardly say they found them at all.

UNDER these decays all the inland Settlements of the *Numidians* and *Mauritanians*,

and all the new built Cities, and planted Colonies of *Hanno*, the *Carthaginian* Admiral, on the Western Coast of *Africa*, as noted before, fell into decay, and except the Kingdom of *Fez* and *Morocco*, now possess'd by the *Moors*, are forgotten, and lost as it were out of the World.

BUT before I leave this part I crave leave to mention one thing, which may at least be diverting, if not positive enough to claim its being instructing, in a case which has been the occasion of much dispute among the Learned Geographers and Historians, as well of the present, as of the past Ages; and which is still not less doubtful and undetermined; namely, How, and when the great Continent of *America* came to be peopled with Inhabitants, and from whence? A difficulty which has been thought so great, that some, and those not among the ignorant part of Mankind neither, would have us put God Almighty to the Repetition of a particular Creation of the Species, both of Man and Beast, for the supplying that part of the World, and which they think it was impossible shou'd be done any other way.

Now, tho' I shall in the pursuit of this undertaking shew how easy it might have been for all the kinds of living Creatures which were found in *America*, except Man, to arrive there without the help of Navigation, much more without the necessity of a Creation; so I cannot quit this part without taking notice how easily it might be, and how rational it is to believe it was peopled by the help of Navigation from the West-side of *Africa*; and how probable, that it was so done at that time, especially when the *Carthaginians* possess'd that Coast; a People wholly addicted to search after new Discoveries, and boldly venturing into all parts of the World for them; as also furnished with Shipping able and sufficient to perform such Voyages,

Voyages, tho' not so well qualified with skill to guide them; which want of skill was however not such as to render it impossible to perform the Voyage, and at least to make the Discovery whether it was sufficient to return from thence or no : Nay the very want of skill, for ought we know, might be the occasion of the Discoveries, when some of those Navigators being by the accident of Winds, or Storms driven off to Sea from *Cape de Verd*, or the Islands lying off from the *Cape*, and running away West out of their knowledge by the force of the Weather till they came in the way of the Trade Winds and the Current which sets in towards the Coast of *America*, where they wou'd in fifteen or twenty Days, supposing a strong gale of Wind, get sight of *Cape St. Augustine*, in the *Brasil*, or of some of the *West-Indian* Islands, such as *Barbadoes*, or *Nevis*, or *Tobago*, or others in the like situation : Nor was this so improbable, much less impracticable, as some wou'd insinuate. For *Example*;

THE difficulty of Communication, between *America*, and any part of the then known World, consisted only in the following particulars.

- I. THE length of the Voyage.
- II. THE want of Shipping.
- III. THE ignorance in Navigation.

THESE three Heads, after having been very often discuss'd, and by very learned Writers, have, I acknowledge, been voted insuperable in this particular Case; and it has been from thence concluded, That *America* could not have been peopled by Sea from the then known World, (*viz*) from any part of the Coasts of *Africa*, or of *Europe*; but

but that the Inhabitants must have found the way over the Northernmost points of Land, or in *Europe* over the Frozen Seas, from the Continent of *Asia*, which being yet undiscovered, must be supposed to joyn some where in the extreme parts.

BUT as this is building all upon suggested possibilities, where all that has yet been discovered appears frightfully impracticable, and that it is evident all that part of the World is, at this time, utterly uninhabited, and we have great reason to believe, that it never was otherwise; so the passage for Mankind, that way seems to me to be absurd, so much as to reason upon, and is apparently impossible.

ON the other Hand, the passage by Sea, as it has appear'd since, to be very easy, so there is no room to doubt, but it was then not only practicable, but was really performed; and this I shall endeavour to make very clear, at least very reasonable, when I come to it again, which will be presently.

BUT before I run too far from home, and that I may take every thing with me as I go, that the Reader may not lose the remembrance of things, I must go back again to *Tyre* and *Sidon* where I set out, and speak of the knowledge in Arts, as well as Trade.

THE *Phœnicians* were not only the Patrons of Commerce, and set Trade first on Foot in the World; but they were, at least, encouragers, (if not the originals) of Arts and Sciences, and the first spreaders of universal Knowledge in the World.

IT is true we give the honour of Astronomical Studies, and all the *Promethean* Fire, which inflamed the breasts of Men with the most early desire of Knowledge, to the *Arabians* and *Chaldeans*; these were the Wise-men called so by way of distinction from all the rest of the World: But it will appear then that the *Phœnicians* were the *Englishmen* of that Age, that is to say, if they were not the

the Inventors, they were the greatest improvers of what others invented, and I must add their Improvement came so in the heels of the Invention, that the Inventors being buried in forgetfulness, time has borrow'd from oblivion, and given the Invention to the Improvement, as you shall see in our next Chapter.



C H A P. VIII.

Of the Phœnicians being early improvers of Learning, as well as of Commerce and Navigation, and particularly of their Prince Cadmus introducing the knowledge of Letters into Greece.

TO the honour of the *Phœnician* Age, it must be acknowledged, that however for righteous Ends, and with just Reasons, to us unknown, Heaven thought fit at last to overthrow them; yet while they remain'd a People, they were patterns of all commendable Virtues; particularly such as tended to the establishing Nations, encreasing the Felicity of Mankind, peopling desolate Countries, and furnishing the Nations they planted with all things both needful and pleasant for Life.

THIS Correspondence of People not only assisted in spreading Inhabitants into remote parts of the World, and so obeying the Directions their Maker gave them at first, namely, *to replenish the Earth*; but that Correspondence necessarily begat Trade, Trade begat Navigation, Navigation by making Discoveries, begat Plantation, and remote Plantations again encreas'd Correspondence: Thus every improving quality circulated through the World, and the whole Globe seems now to be brought into a kind of general acquaintance with
it

it self, the remotest Nations converse, the People know one another, nay, I may say, continually talk with one another, by Missives, by Messengers, and by Correspondencies of all sorts.

TRADE is certainly a Patron of Arts, as it is the Mother of Industry; Commerce is naturally an encourager of Learning, and has by its Correspondence been the greatest assistance to human Knowledge.

How has Trade pickt up all the most useful Drugs in every part of the World for the supply of Physic, and for the help and health of Mankind? Do we not see the *Materia Medica* fetch'd from the most remote parts of the World? Is not every *Druggist's* or *Apothecarie's* Shop furnish'd from both the *Indies*, and almost from both the *Poles*? It wou'd take up more room in this Work than 'tis possible to spare to discourse fully of this one Article; and yet 'twou'd be unjust to omit taking notice how every new Discovery, every Plantation, every new branch of Trade, furnishes some new Thing, some Rarity in Nature, some Specific in Physic for the relief of a distemper'd World.

FOR Example: How many choice Plants and Drugs did the discovery of *America* furnish this part of the World with, of which they knew nothing before? What poor weak Tools had our best Physicians to work with, in case of Agues, and all intermitting periodical Fevers? How did the Ague so master the utmost skill of Physic, that for some Ages it past for a possession of the *Devil*, till *America* furnish'd the true and only Exorcist the BARK, a Sovereign, a Specific, a neverfailing Medicine.

ADD to this, That now abus'd, but in its medicinal Virtue wonderful plant, *Tobacco*, unknown also till the same discovery of the *West-Indies*;
till

till Navigation carry'd us to *America*, and Trade brought *America* to us. 'Twould be tedious to run into all the particulars, take some of them in gross.

THE *Sugar-Cane*, was a Discovery, as to *Europe*, of the same date; for tho' 'tis thought they knew the use of it in the *East Indies* before, 'tis certain we knew nothing of it on this side the *Mediterranean Sea* till it was brought to us from *America*.

THE *Cochineal*, vulgarly call'd *Scutchenele*, for Dying Scarlet :

THE *Cacao* or *Nut*, for making of *Chocolate*, with many others :

So of Woods also for Dyers, as *Logwood*, *Brazil-Wood*, *Nicaragua-Wood*, &c.

As *America* has been thus fruitful of medicinal Drugs, so have the Eastern parts of *Asia*, I mean *China*, *Japan*, together with the *Molucca* and *Philippine* Islands, also the Islands of *Java*, *Borneo*, *Ceylon*, and *Others*.

All these Discoveries are familiariz'd to us by Trade, and that Trade made practicable to us by the assistance of Navigation; both which, as above, we owe in their Beginnings, and first Improvement, to the Industry and Application of the *Phœnicians*, and particularly the People of *Sidon* and *Tyre*, and the parts adjacent.

BUT this was not all: As they began with Commerce and Navigation, so, as Commerce is a friend to all Improvement, and the Wealth which they gain'd by their Commerce encouraging them in the search after Knowledge, they became also great Patrons of Learning; and joining to them the *Egyptians*, who taking them as Nations, were but the elder Branch or Brothers by Race to the *Phœnicians*: As *Canaan* was the Son of *Ham* or *Cham*, so *Chus* was also his Son, and so were *Mizraim*,

M

Phut,

Phut, and *Lud*; and *Cham* himself set up his Kingdom in *Egypt*, and reigned there 161 Years, while *Chus* peopled *Arabia Felix*, and his Son *Nimrod* began the *Chaldean* or *Babylonian* Monarchy.

THIS short piece of Chronology, which I shall trouble you with no more of, was necessary here to shew, that tho' Science had its first Introduction in the more remote parts of the World, among the *Chaldeans* and *Arabians*, and then as far back as *Atlas* and *Prometheus*, and that the *Magi* or *Wise-men*, so call'd for distinction, and the *South-Sayers* were first found in those Parts; yet that the *Phœnicians* and *Egyptians* were the most fam'd improvers of all their Knowledge. The Great *Prometheus*, they tell us, first studyed Astronomy, and made his first Observations upon Mount *Caucasus* in *Media*, and the Eastern parts of *Chaldea*; from whence he is fabled to be chain'd down to that Mountain, with a Vulture eating out his Bowels; which is only an allegory or invention, signifying, that he was eaten up or consum'd with an eager desire after Knowledge, and that he tyed himself down so assiduously to his nightly Observations of the Stars lying on his Back on the Ground, many Nights together, on the Summits of those Hills, till by the severities of the heat and cold, Vapours of the Night, and other inclemencies of the Season, he contracted a Disease which eat out his Vitals, and destroy'd him; thus *Atlas* his Brother is said to support the Globe upon his Shoulders, and is painted with that heavy load upon his Back, intimating by way of Fable, that by his great knowledge of Astronomy, and his great Wisdom, he directed all human Government, and the Affairs of greatest import in the World.

BUT if *Prometheus*, a *Chaldean*, first by his study of Astronomy communicated Wisdom to the World; *Ptolemy*, an *Egyptian*, improved upon his Studies,

Studies, and gave us the first System of that Science which prevail'd in the World for above 2000 Years, till in these latter Ages of Wisdom, that Knowledge is yet farther extended, and the new Philosophy has prevail'd upon it; the *Copernican* System being found more consistent with it self, and with the rest of Nature.

THIS is that *Prometheus* to whom the antient Atheists wou'd, if possible, have ascribed some of their Maker's Honour in creating Man: The Story is worth noting, to shew how much wiser the antient Heathens were than the Atheistic part of Mankind, of what Age soever; the Fiction pretends, That *Prometheus* making the figure of a Man in Clay, stole Fire from the Sun to enervate the lump, and so gave it motion: The meaning was honestly this, That before *Prometheus* Mankind was little better than a lump of Earth, so grossly Ignorant, Brutish, and Stupid, that he had nothing of supernatural Knowledge in him; but that he, by the study of the heavenly Bodies, inspir'd the Minds of Men with Divine Wisdom, and the knowledge of the true God. Thus far the Moral of the Fable is good, but as afterwards carry'd on it rose up to an Absurdity, by that sort of People, who wou'd have it that Man made himself without any Original, or first moving Cause; on which occasion take the following short reply.

*Prometheus, thus, so antient Poets say,
First made the model of a Man in Clay,
Finish'd the beauteous Parts, and when he'd done,
Stole vital Heat from the prolific Sun.*

*But not a Poet tells us to this Day,
Who made Prometheus first, and who the Clay;
Who gave the great Prolific to the Sun,
And where the first productive Work begun.*

BUT this is a Digression.

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As thus the *Egyptians* had their *Trismegistus*, and their *Ptolemy*, who improv'd upon *Atlas* and *Prometheus*, and encreas'd the Knowledge and Understanding of the Ages which follow'd: So the *Phœnicians*, not confining themselves to Trade and Navigation, had their *Cadmus*, to whose Wit and Invention, they to this Day, tho' wrongfully, ascribe the invention of Letters; I say wrongfully because I think it is clear that the first knowledge of Letters was from Heaven it self, and that immediately by the Finger of God writing the *Hebrew* Law, which we call the Decalogue or Ten Commandments, and putting it into the Hand of *Moses* to teach the *Hebrews*. It is easy to bring back all the knowledge of Letters, the giving Sounds to Figures, and marks, join'd by Prolation into Words, to this great Original, and to prove that both the *Egyptians* and *Phœnicians* had no other knowledge of Litterature, but what deriv'd from this solemn Beginning.

BUT not to dwell upon that here, which I may have an occasion also to mention again: I do not by this at all lessen the Honour of *Cadmus* that learned Prince; for he was both Prince and Scholar; and tho' he did not invent the *Hebrew* Alphabet, or the first way of using Letters, and impressing Letters and Words for Speech, and Writing; yet he, as above, greatly improv'd Knowledge. I will not make *Cadmus* the Improver, and God the Inventor, for 'tis evident the *Hebrew* Language was so perfect in its Original, that it has suffer'd the least alteration of its Orthography of any Language in the World; nay, we are not sure that it has suffer'd any alteration at all; and the *Jews* tell you, that all the pretended Improvements, which some speak of, are only advances towards a restoring it to its heavenly and original Purity,

Purity; from which the *Hebrews* in their several Captivities had suffer'd it to degenerate.

BUT, I say not this to lessen the Honour of *Cadmus*, that learned and ingenious Prince of *Tyre*, tho' he did not bring the knowledge of Letters into the World; yet this he did, he invented a new way of writing those Letters, and form'd a new Alphabet of his own: This new way differ'd from the *Hebrew* in this great and significant Article, namely, (1) That as the *Hebrew*, and from the *Hebrew* all the other Languages, at that time in use, Read from the right Hand to the left; he inverted the Order, and wrote from the left Hand to the right. (2) As the *Hebrew* Alphabet was assisted by a great number of Points and Marks, by which the same Letters had their differing Pronunciation and differing Signification, he form'd a new Alphabet of simple Letters, with very few Marks or Points, but with one small dash call'd *Accent* to assign the Emphasis of Pronunciation, to this or that particular Vowel.

THESE Letters he call'd *Alphabeta* from the two first Letters *Alpha* and *Beta*, as we call our Alphabet, in our vulgar Speech, to this Day, by the Name of the *A B C*, making a Word or proper Name of those Letters, importing the rest; so we say of an ignorant Fellow, let him go learn his *A B C*, that is the Book, where the knowledge of the Letters are first learn'd, and where the Alphabet or *A B C* is placed at the beginning.

AND yet *Cadmus* invented but sixteen of the Letters neither, the others were added long afterwards by other learned *Greeks*, of which in its place: With this Cargo of Learning, *Cadmus*, the first Merchant of that kind, is said to have gone by Sea from *Tyre* into the *Archipelague*, and landing in *Bæotia*, a Province of *Achaia*, afterwards call'd *Greece*, and now part of the *Morea*; he built
Thebes,

Thebes, and was deservedly made King or Lord of it, being his own City, where, as the Poets feign, he sowed Teeth, and reap'd a Harvest of Men; his Story is fabled into many sorts, each of which however, may have their Moral peculiar to themselves, but are not to our purpose here.

As the knowledge of Letters flourish'd among the *Phœnicians*, and the study of Astronomy among the *Egyptians*; so the original Wisdom and Learning of the *Chaldeans* and *Arabians* sunk into mere South-saying, interpreting Dreams, false Prophecies, Magic, and Witchcraft; and by degrees fell into gross and stupid Idolatries, in which they practis'd the most fordid and brutish things to carry on their several kinds of Sorceries 'till it became a proverbial Speech, that the *Egyptians* convers'd with the Gods, the *Phœnicians* with Men, and the *Arabians* with the Devil; the meaning was, the *Egyptians* convers'd with the Stars in their Astronomical Observations, the *Phœnicians* with Men by their extraordinary forreign Commerce and Navigation, which brought some of all Nations to them; and the *Arabians* and *Chaldeans* with the Devil by their skill in Magic and Witchcraft.

NOR can we suppose for they are inseparable that where Learning and Science thus flourish'd (for speaking of the Times so near their Originals it may justly be call'd their flourishing) I say, where Learning was thus encourag'd, Arts wou'd go Hand in Hand with it: and some Instances may be given that it was so, and that in some inimitable particulars as that Prodigy of Architecture, as well for the Magnificence of them, as the Curiosity of the Workmanship, I mean the *Pyramids* for the repositing the dead Bodies of Men, where if we may believe Tradition, the Bodies never perish.

IN the next place, the Bodies themselves, that is the manner of so preserving them, as to make them

in one respect Immortal; those they call *Mummies*, the Art of Preserving of which, as it was not known to any part of the World but those particular People, so it is now lost to them as well as to the rest of the World.

NO R is this all, but they will tell us that such was the extraordinary virtue of the Spices, and Gums, and Drugs us'd in those preparations, that they are now bought and preserv'd with the dead Bodies for the use of Physic and Surgery, that is for Pills, and other medicinal Preparations; and also for Plaisters to heal, and the Flesh and Blood, Nerves and Muscles, Sinews and Tendons, and even Bones of the dead Bodies are by the length of time so incorporated with the Sear-cloths, in which they were wrap't, and with those Spices and Drugs, &c. of which those Sear-cloths are full, that altogether make now a sovereign Medicine applicable in the most dangerous of all Diseases, (*viz.*) pestilential Fevers, Epilepsies and decays of Nature, and even in some Poisons.

THIS exquisite piece of Knowledge, as it was early in practice, so with the Destruction of those Nations, it seems to be lost from among Men; and if the Conquerors of those Nations obtained any part of it, they did not seem to carry it away with them; nor did the Wisest of them, no not *Alexander* himself, or his Successors, as we read of, ever preserve that Art.

SOME are of opinion that the Skill of the several Orders of Architecture came from the *Phœnicians* and *Egyptians*; and several things seem to favour that Opinion.

(1) THE magnificent Ruins of the two most ancient Cities of those Times, which were perhaps the most Magnificent in the World for those first Ages,

Ages, (*viz.*) the City of *Tyre* in *Phœnicia*, and the City of *Thebes*, that is to say the *Egyptian Thebes*, the mighty Columnes and magnificent Gate-ways, Arches, and other things of that kind which belong'd to them, being yet to be seen in the Ruins of those places.

- (2.) THE Testimony of King *Solomon* to the *Tyrian* King *Hiram*, that his Subjects were skillfull in such Works as were necessary in so nice a Service, as the building the Temple of *Jerusalem*. There is scarce room to question but that *Solomon* who resolved to erect the most glorious Fabric in the World, and who even to profusion spent so prodigious a Wealth in the Building, would likewise spare no cost to get the most exquisite Workmen for the finishing it; and yet we find he sent no farther than to *Hiram* King of *Tyre*, not to *Egypt*, nor to the King of *Syria*, or *Affyria*, but to *Tyre* his Neighbour King; and he gives Testimony to the Subjects of the King of *Tyre*, 2 Chron. ii. 7, 14. *Send me now therefore a Man cunning to work in Gold, and in Silver, and in Brass, and in Iron, and in Purple, and Crimson, and Blue, and that can skill to Grave with the cunning Men that are with me in Judah and Jerusalem, whom David my Father did provide. And verse 14. The Son of a Woman of Dan, and his Father was a Man of Tyre, skillful to work in Gold, and in Silver, in Brass, in Iron, in Stone, and in Timber, in Purple, in Blue, and in fine Linnen, and in Crimson: And also to grave any manner of Graving, and to find out every Device, which shall be put to him with thy cunning Men, and with the cunning Men of my Lord David thy Father.*

HERE

HERE is a compleat Testimonial that the *Tyrrians* were great encouragers of Art, and had made great improvements in the most exquisite parts of Handy-raft, especially Architecture; *Thy Servants can skill (or have skill) to hew Timber in Lebanon*; 'tis not to be suppos'd that their skill lay only in felling the Trees, very little Art being wanted for that kind of Work; but the meaning must be, they were extraordinary skillful in framing the Work, for all the Temple was built at a distance; not the noise of an Ax, or a Hammer, was heard in the House, not so much as the cutting the Stones, but it was all done in the Mountains.

THEN for other Works. The next was the *Foundary*, which as it was in it self, an extraordinary piece of skill; so if you consider the several Works perform'd, we have Reason to believe, the like could not be done, at this time, by the greatest Masters in the World; namely, the *SEA of Brass*, which stood without the Temple, for the Priests to wash in; and the two Pillars or Columns of Brass, which stood in the Porch: the Dimensions of both were prodigious, and such as, if the Scripture were not our Author, (and that will go but a little way with some neither) we shou'd never believe practicable. As for the *Sea of Brass*, it might well be call'd a Sea indeed, for it held above 125 Ton of Water, in one solid Vessel of Brass: Then the two Columns of Brass, which the same Artist cast, being solid Brass, forty Cubits, that is, threescore Foot high, and with the Flowers, and Chain-work round them, were twelve Cubits, that is, three Fathom about.

THE same Workmen was, it seems, by the same Text, an admirable Artist at Engraving, and a worker in Gold, and Silver, and Purple,

and Blue; by which I understand, either an extraordinary Embroiderer, or a Weaver of flower'd Silks, mixt with Gold and Silver; all which Arts, it seems, he had been brought up and was arriv'd to a perfection in at Tyre. So that the encouragement given to Arts, by the occasion of their Trade was apparently very great; nor do we read of any thing done among the *Romans* that comes near it, tho' Arts might be said to flourish very much too in their Time.

FROM hence I must take the liberty to note, that upon the Destruction of this diligent People, and afterwards of their Posterity the *Carthaginians*, (who were alike industrious) their skill in those things dyed with them; the knowledge in those more exquisite Arts perish'd with them; the *Romans* that succeeded the *Carthaginians* made nothing of it; they civiliz'd the Manners indeed of some of the Nations, whom they conquer'd; but they did not encourage Arts and Sciences like the *Tyrians*, or propagate Trade and Navigation like the *Carthaginians*: and therefore we find no such Artists among the *Romans*, as those of Tyre appear to have been, or indeed as the *Egyptians*, and as the *Carthaginians*. The *Romans* indeed were good Architects, but it was in the latter part of their Empire, and besides they had all their orders of Building from the *Gracians*, as the *Dorick*, the *Corinthian*, the *Attick*, all *Grecian*. The most famous Masters of Sculpture and Painting, were *Gracians*; the Gladiators indeed, and the Fencers, the Great Generals, and Officers, were *Romans*; in the Fighting part they out-did the whole World; but the Arts of Peace were not their Province.

THE great Image of *Nebuchadnezzar* the King of *Babylon*, the great Coloss at *Rhodes*; these were all perform'd in latter Times, tho' by the same Race of Artists; but we see nothing of it among the Artists of our Age.

SOME have said that *Nebuchadnezzar's* Image of Gold, was Cast by a *Tyrian* Engineer, whom he took Prisoner at the time he besieg'd *Tyre*, of which I have spoken before; and the Gold, which must be of an immense Value, was made up out of the plunder of the Cities of *Egypt*, which he conquer'd after his disappointment at the Seige of *Tyre*; for there, tho' he took the City, he got no plunder, since the Inhabitants ship'd themselves off, while he lay under their Walls, and left him to take what he could find, as you have heard.

BUT as God gave him *Egypt* for his Wages, as the Text says, there he made himself full amends, and got an infinite Treasure; with which, if that part of the Story be true, and perhaps with the plunder of God's Temple and City also, he cast this monstrous Image, which he set up in the Plains of *Dura*, without the City; the height of it was sixty Cubits, that is, ninety Foot, which is within eleven Foot, half as high as the Monument; the breadth only nine Foot; how thick is not set down; and this Image was of Massy Gold.

IT is not very hard to cast up the weight of the Gold, reckoning every inch Square and Solid to be four Ounces, as no doubt it wou'd, and every five Ounces to be worth twenty Pounds Sterling, according to the present Standard of Gold, which is four Pounds per Ounce.

IF the Artist, which Cast this Image, was an Inhabitant of *Tyre*, as is not improbable; this is the use I make of it, namely, that the

Phœnicians were (even then) great improvers of Art, and great encouragers of it also; and I with great certainty venture to say, that it was all a consequence of their being great improvers of Commerce; for Trade thriving, Arts always flourish; Commerce is a friend to Learning; Trade makes the People rich, and their Wealth puts them upon improvement of Arts and Sciences; Riches reward Application, and encourage Ingenuity; Money, where there is a Genius inspires the Mind, and gives pleasing Representations of an encrease of Gain, and especially where Wealth is gotten by Trade, it pushes on the Mind for more Trade.

NOTHING makes Arts and Sciences thrive more than their working on a public Purse; no private Man can reward as the public can; and Kings therefore are applauded as the encouragers of Learning, because they can, and very often do bountifully reward Learned Men, Men of Genius, and of Application.

LET us then take the *Tyrians*, and the *Egyptians*, for they were contemporary: I say, let us take them in the early times of the World before the Conquests of *Nebuchadnezzar*; and while they were flourishing in Wealth by Commerce, as they both were at that time; you will also find that they were famous for Wisdom and Learning, for Knowledge and Understanding; and that they had always very great Men flourishing among them; I mean great for Learning, and for encouraging of Learning of every kind, and especially in Astronomy, in Philosophy, and in all the other parts of useful Knowledge.

IT is true, Learning was then understood to mean the same thing which we understand by it now; the Study in their Schools was not
Books,

Books, but their School-Masters read them the Precepts of Antient and Wise-men, and deliver'd them in Philosophic and Wise Discourses, not in Writings or historical Narrations of their own.

AMONG these, they had the Precepts of *Noah*, which contained, as the Learned say, twelve Sentences for the Government of Life; and for the guiding themselves in the various Scenes Men were ordinarily suppos'd to pass through: These Precepts, like the Ten Commandments, were said to contain, first, Directions for God's Worship; and next, The Laws of Right and Wrong, or Rules of Morality; but we never find they were committed to Writing.

THE teachings in the Schools contained Wise Comments upon that great Text, which however the Teachers themselves did not stick close to, as to Religion; the Polytheism of the Nations presently breaking in, yet the Moral Duties took place, and the Philosophers obtain'd that Name; for being Lovers of Wisdom, and Teachers of Knowledge, instructing the Youth of the World, as in Wisdom and Knowledge, so also in Virtue and Piety.

FROM that first or great Class, in which, I say, the Precepts of Virtue were instill'd into the Minds of their Scholars, they proceeded to instruct them in the principles of Philosophy, as well Natural as Experimental; but how far they went at that time, we can make no judgment; some are of the opinion, that they went beyond us all, that they had a greater knowledge in many things than ever we arriv'd to since. A *French* Writer, whose Name I cannot now recollect, tells us, That above 2000 Years ago, and long before *Hippocrates*, or even *Æsculapius* himself, they had a way, with safety, to cut

cut for the Stone in the Kidnies, which the greatest Artists in Surgery, and the greatest Anatomists tell us now, is impracticable; as also, that they had several Medicines which wou'd break or dissolve the Stone in the Bladder; that they perfectly understood the Circulation of the Blood (as indeed 'tis evident *Solomon* did) *Eccles.* xii. 6. where the Wheel at the Cistern, and the Buckets at the Well, are clear References to the stop of the Circulation.

If these things are true, as I must confess is more than probable, what a blow to the learned World was the growing Conquest of the *Romans*? Nay rather, what injury to the general Improvement of Mankind, has Pride, and the Ambition of Men, as well States and Governments, as Kings and Princes, been in the World? who by introducing Wars and Devastations, and by inhuman bloody Measures brought Desolation upon flourishing Nations; and have as at one blow, overthrown all the learned Improvements, all the wisdom and knowledge of Arts, and of useful Inventions in the Countries they have Conquered?

How many Masters of Science, how many Teachers and Instructors in useful Arts did *Alexander* the Great, notwithstanding his being a lover of learned Men, bury in the Ruins of that great City *Tyre*; and in the bloody Revenge which he took of the Citizens? of whom he put 26000 to Death, by way of cold Blood Massacre? How many flourishing Merchants, their Wealth being plundered, their Wives and Children murder'd, and their Ships burnt and destroy'd, did he hang upon the Sea-shore on Gibbets, in a line of six Miles in length; and as the famous Mathematician *Archimedes* was kill'd in the sacking of the City of *Syracuse*, in the middle

middle of all his Schemes? So how many Philosophers, Astronomers, and Men of Genius for all sorts of virtuous Improvements did *Alexander* destroy in the Ruin of that one City? Whose Wisdom died with them, and whose Knowledge could no more be convey'd to Posterity, than their Lives could be restor'd; and what amends did he, or could he make to the World for all this? What signify'd his building one sorry Port at the Mouth of the *Nile*, I mean *Alexandria*; as if he, when he had destroy'd the Merchants, who were the life of the Commerce at *Tyre*, could remove the Course of the Trade too, whither he pleas'd; whereas the foreign Correspondence, which was the life of Merchandizing, depended upon the very Men that he had destroy'd. Nor did the end answer his expectation at all; for tho' *Alexandria* did flourish, and grew a very considerable place, yet it was after a long Series of time, and upon quite a new Foot of Correspondences; namely, between *Egypt* and *Greece*, and between *Egypt* and *Italy*; whereas the *Tyrian* Merchants had establish'd a Commerce thro' the whole *Mediterranean*, up to the Mouth of the Straights; had planted Colonies at *Carthage*, at *Cadiz*, at *Palermo*, and several other places, which *Alexander* never had any Interest in, or Influence over; nor did the knowledge and study of Arts and Sciences ever come to any extraordinary height at *Alexandria* as it had done at *Tyre*. But to go from thence to the next Desolation, which the trading World suffer'd, I mean *Carthage*: How much does the trading World to this Day lament the ruin of the City and Government of *Carthage*, for the loss of which, all the Wisdom of the *Romans*, as a State, and all their encouraging of Arts and Learning, never made Mankind any
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amends to this Day? particularly, *Rome* never could recompense the great loss it was to the World in the ruin of that extensive Trade of *Afric* and *Egypt*, which the *Carthaginians* had establish'd; and which never to this Day has been recover'd; as you shall see in its place.

WHAT a noble Trade might we in these Islands have by this time carry'd on with the Coast of *Afric*, if there were 3000 populous Cities upon the Coast of it, as was the case in those Days? whereof one, namely, *Carthage* had 700,000 People in it, and were Masters of an immense Wealth, when the *Barbary* Coast was populous like *France*, and carry'd on a prodigious Trade with all the known World?

LET us but imagine *Africa* peopled now as it was in those Times, when the *Numidians* and *Mauritians* were a People suppos'd to have each two Millions in Number, and inhabited all the Plains of *Barca*, the fruitful Fields of *Zagaon*, and *Tebesa*, and of *Temesna* in the Kingdom of *Fez*, places, now left desolated, and almost uninhabited; when besides *Carthage*, which was the Emporium, the City of *Utica* contain'd 100,000 People; the Cities of *Tingis*, of *Portus Magnus*, and of *Tamfisga*, each as many, when the Lands were cultivated; the Corn, Cattle, Wines, Olives, and other product of the Earth consum'd upon good Terms at home; and the Copper and Brass, Iron, Allom, Almonds, Raisins, Silver, Gold, Wax, Honey, Leather, Skins of Beasts, Horses, Gums, and Drugs, which were produc'd by the Country, all along the Coast, supply'd all the rest of the known World as Merchandize for Exportation, and brought the Merchants in return the Product and Manufactures of all the Countries to which they traded.

ADD to all this, That the People of this vast Empire were not as the *Moors* and *Turks*, who succeeded them, are now; an indolent rapacious Crew of Vagrants and Thieves, who neither have Trade, or seek any; who cultivate no Lands, but for immediate Food; who have neither Numbers to consume the Product of a fruitful Soil; Merchants to export it to other Countries, or People to raise a product for the Consumption which might be demanded.

THE *Moors* of *Fez* and *Morocco*; What are they, for encouraging Nations to trade with them? What but a merciless People, with whom no Christians care to deal, much less to live among them? The *Turks* of *Algier*, *Tunis*, and *Tripoli*, what are they, but so many Dens of wild Beasts, worse indeed than the Tygers and Lyons of the Desarts behind them? Being a People accustomed to Cruelty and Robbery. They keep Faith neither with God or the Devil; they range the Seas for Plunder, and live upon the Spoil of Mankind, and of whom it may be said, 'tis the shame of Mankind that they are suffer'd to live at all.

ALL these Cities, and a number more which in the *Carthaginian* Times were inhabited, were spread, I might say indeed throng'd with diligent, numerous, wealthy, and virtuous Nations, populous beyond measure; the inland Towns rich, and made so by their own Industry; the Seacoast Towns addicted to Commerce, and made rich by Merchandize and foreign Discoveries.

THEY did not go cloath'd like the naked *Moors* whose best Garment is a Blanket or a course woollen Mantle thrown over their Shoulders; with hardly other Clothes to cover their Nakedness, and the Women little more than a Veil to hide them. But in those Days the

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Carthaginians were gay and delicate, dress'd well, and valued themselves upon it; and as they Imported the Product and Manufactures of other Countries, wou'd no doubt by this time have carry'd on a most noble, and to us, beneficial Commerce for our *British* Manufactures, which even as it is now, are very valuable among them; and which wou'd have been a Trade by this time equal to that of *Spain* and *Portugal*, only perhaps fifteen times as much. But of this hereafter at large when I come to speak of the advantage it wou'd be to *Europe* to recover, by Conquest, those glorious Cities and Countries, and re-plant those Nations; the loss of which, is now so fatal to the World.

IN the mean time, to bring the thing back to what I began it for, What amends did the *Romans* make to the tradeing part of the World, and to the improving part of Mankind by the Conquests they made? What have they done, but rooted out an industrious People, and planted in their room a Crew of strouling Vagabonds; who as they brought nothing but Brutality and Cruelty with them; so they have left the Country to a Succession of People infinitely worse than themselves; and, as to the common benefit of Mankind not at all more valuable than the Beasts of Prey which over-run the Country with them.

IT is true, the *Romans*, while their State remained flourishing, did in some measure maintain their *African* Conquests; but notwithstanding this the havock of People which they made in the last Punick War, in which 'tis said, above a *Million* of People lost their Lives, was such, that when the *Roman* Power decay'd, and the barbarous Nations broke in upon their Empire; *Africa* was able to do little; the numerous Nations,

tions, which the *Romans* subdued, were left weak; thin of People, and those few subjected and impoverished: and so they were unable to resist the inundations of the *Goths*, and after them of the *Saracens* and *Mahometans*, *Moors*, and Others; who over-run them, and by their several Conquests, brought the Country to the abandon'd Condition in which we now see it.

BY all this Series of Disasters, *Africa* is now no more a place of Trade; all the Commerce of the whole Country, from the Borders of *Egypt* to *Cape Spartel*, and from thence South to *Cape de Verd*, is not equal, put it all together, to the Trade of the single Port of *Cadiz* in *Spain*; no, nor to a half part of it, tho' you were to leave the Article of *New Spain*, and the *Galileons* out of the Account.

WHAT a loss then to the Commerce of *Europe* have those two Actions been, which Men in those Days call'd Glorious; and how have we Reason to blast the Memory of *Alexander* the Great, and *Scipio Africanus* with a mark of Infamy never to be wip'd out, for destroying the only two Governments in the World, which were qualified to make all the rest of Mankind great and happy?



CHAP. IX.

Of the flourishing condition of Commerce when the Carthaginian Government was overthrown by the Romans: What a blow that Conquest was to Trade; and how the knowledge of America, discover'd by the Carthaginians, was lost to the World by their Disaster.

HAVING observ'd, in the last Chapter, what a loss to the trading World the destroying of the Cities of Tyre and Carthage severally, were in the respective Ages that follow'd, and how little the Roman Government did, after the said Conquests, to recover Trade, and encourage useful Discoveries in the World; it comes of course to look back upon the progress of the Carthaginians in the time of their Prosperity, what they did towards the improvement of Trade, which future Ages, *had not their Ruin interven'd*, might have improv'd upon, and encreas'd in the World; and by which, the great encrease of Commerce, which the World has since that arriv'd to, might have been yet much more enlarg'd.

THIS enquiry is not merely to look back into Antiquity; That, as I have said, being not the business of this Undertaking; but to show us what may be, by what has been, and how evident it is, that this part of the World call'd *Africa*, which at present, seems to be given up to Barrenness and to wild Beasts, once was, and still

still might be rendred useful to the trading World, wou'd the Christian Nations apply themselves first to the Conquest of it; and then to the planting and cultivating it for the multiplying its Inhabitants, and bringing Trade and Arts to flourish in it, as once they did.

IN order then to this enquiry, and to bring it home to the proposal I am to make: Let us first see what *Africa* was in the height of the *Carthaginian* Prosperity, or, if you please, in the time of the second Punick War: That War, which being carry'd on by *Hannibal*, and transfer'd from *Spain* into *Italy*, was carry'd even to the Gates of *Rome*; and once, namely, after the Battle of *Canna*, bid fair, had *Hannibal* improv'd his Victory; I say, bid fair for the ruin of the *Roman* Empire; but which, *Hannibal's* prudence failing him, ended in the total ruin of *Carthage*.

The State of Africa at that Time, was this.

CARTHAGE, a noble flourishing City and Common-wealth, sat as Queen of the *South*; the City seated for Commerce, as well as for Empire, near the Port of *Golletta*, commanded the Land by her victorious Armies, and the Sea by her powerful Fleets.

SHE was possess'd of all *Africa*, from *Barca*, bordering on *Egypt*, to *Tangis* or *Tangier* at the Straights Mouth, and from thence South to *Santa Cruz* to *Cape Blanco*, and even to *Cape de Verd*.

THE *Numidians*, a powerful, and infinitely populous Nation, with their King *Jugurtha*, and the *Mauritanians*, (a Nation as populous, tho' not so fam'd in the Field, their Cavalry not being so good as the *Numidians*) were also with their King *Juba* Tributaries to the *Carthaginians*.
Thus

Thus stood their Force by Land upon the Continent of *Africa*.

BEYOND, or upon the Sea, their Power was very great; they had conquer'd, and entirely possess'd the two Island Kingdoms of *Sardinia* and *Sicily*, the latter being at that time very strong, for the City of *Syracusa* was said to contain six hundred thousand People.

IN *Europe*, they possess'd all *Spain*, except that part we now call the *Asturias*, and the Kingdom of *Navarr*; and in *Italy*, their victorious Army was possess'd of all *Calabria*; great part of that we now call *Tuscany*, the City of *Capua*; and in a Word were a Terror to *Rome* it self.

AT the same time that their Power was thus extended, you are to allow them to be the most addicted to, and the greatest encouragers of Trade in the whole World. As they had a Genius for Commerce, so the Country they possess'd was fruitful in abundance of the Materials of Trade; that is to say, the most extraordinary product of the Earth for Exportation, and the most extraordinary product of a diligent industrious People in the most ingenious Manufactures, for their Consumption; being the Employment of the Poor, as well in the Nations about them, as of their own Subjects; also these was exported, by them, to other Countries.

THEY had then, by the advantage of Numbers at home, a great Consumption of the product of other Countries, which they brought back in return for what they exported; so that they had both the ends of Commerce in their own Hands.

THEIR Export is the chief thing to be spoken of here; for this certainly remains, may be recover'd and restor'd, and is, or wou'd be the same, as before: As for their home Consumptions of foreign Goods, that was ruin'd by the *Romans*, in destroying

destroying the People; and can never be restor'd till the Country is re-peopled, and the Inhabitants made rich and numerous as before.

THE product of *Africa* consisted in four capital Articles of Life; and which, as being most necessary for the Sustenance or Subsistence of Mankind, was acceptable in all parts of the World: These were *Corn, Wine, Oil, and Salt*; of these they had not plenty only, but a profusion, not only sufficient to supply the great City of *Carthage*, and the other populous Cities which they had built, and possess'd upon the Coast of *Africa*, such as *Utica, Tingis, Adrumetum, Aphrodisium, Tacape, Syrtes, Portus Magnus, Porta Deorum*, and many more, but they had enough to supply their foreign Colonies, as well on the Western Coasts of *Spain*, where they had several large Settlements, and which grew populous by the thronging in of the *Spaniards* and *Lusitanians*, the *Celteberians*, and other Nations to them, for the sake of the Liberty and the Protection they enjoy'd from the *Carthaginians*; but also to all their more Southern Colonies on the Western Coasts of *Africa*; where they had Cities and Sea-Ports, settled for the carrying on the Trade of those Countries, which was chiefly in Gold, and Slaves, Elephants Teeth, Drugs, Civet, and such like rich Goods, which those Countries produce to this Day.

IF any Man question how the product of those parts of *Africa* was found out in those early Times; the answer is very easy; namely, there was little or no difficulty in it, for the Ivory is found in the Desarts, where the Elephants, who after several Years, cast their Teeth, dropt, and left them; and in the same manner they are found at this Day, and no otherwise; that they kill Elephants, for the sake of their Teeth, is a delusion, and a mistake; nor cou'd
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the *Negros* kill them, or durst come near them; except the *Numidians*, who by Stratagems took them young, and bred them up for the Wars, which the *Negroes*, to this Day, understand nothing of.

THEN, as to the Gold, which was fetch'd from those Countries, it was then, as it still chiefly is, in the Sands and Shoals of the principal Rivers, so that the Gold and the Ivory was with great Facility produced in those Countries, at that time, and consequently the Cities and Colonies of the *Carthaginians* on the Coast of *Africa* had great encouragement, being able to make such rich returns; on the other Hand, those hot Climates, being within ten to fifteen Degrees of the Line producing little or no Corn, or other Fruits, for the subsistence of the People, were oblig'd to fetch their supplies from *Carthage*, or the Countries about it.

AND here two things are very remarkable, with relation to Trade.

I. That, had the *Carthaginian* Government remain'd we have Reason to believe that we had found many noble Settlements and populous Cities, and perhaps Nations, upon all the Western Coasts of *Africa*, from Cape *Spartel*, quite away to the Cape of *Good Hope*; and which had still been more considerable, we had found a civiliz'd, industrious, trading People, every where planted; prepar'd for Commerce, and furnish'd with a Product fit for making their Returns for all the Manufactures, and Merchandizes of *Europe*, when we had come to trade with them.

II. As this did not happen, but that the *Carthaginian* State was overthrown and destroy'd, all these

these Settlements died in their infancy for want of those supplies; and when we, in so many Ages of Time, came to discover those Coasts, we found them either Desolate and Barren, and almost without Inhabitants; or those Inhabitants untaught, wild, and naked Savages, the remembrance of former People being quite lost and sunk out of their Minds, nor so much as any civilized remains left among them.

IT seems to be a Question, naturally coming in our way here, (*viz.*) Why shou'd the *Carthaginian* Settlements, on this side of *Africa*, perish and die upon the conquering the *Carthaginians*, whereas the like Settlements on the Coast of *Andalusia*, *Lusitania*, &c. remained flourishing, and encreasing, and have continued to this Day.

BUT the Answer to this is ready, (*viz.*) That after the Conquest of *Carthage*, the *Romans* pursued their Victory, subduing all the Countries, where the former had settled their Colonies, in *Spain* and *Portugal*, and even into the Bay of *Biscay*; where tho' they did not propagate Merchandizing, and foreign Commerce, they did not supplant the Nations or Cities, only subdued them, and left Detachments of Soldiers to keep and maintain their Possession. But the case differ'd extreamly in the South; for as there were no Nations on that side worth subduing, or any Countries worth keeping possession of, only Settlements and Colonies, which being lately made, required an expensive Supply, yearly, for their support: These the *Romans*, having but little Genius to Trade, and but few Merchants among them, had little or no regard to, and took no care about, and so they perish'd for mere want of being supported.

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AND this I take to be the Reason also, why, tho' I am clear, that the discovery and first planting of the Continent of *America* was from thence, yet that Discovery was no farther proceeded on, after it was first made, or the Memory of it preserv'd; but that as the Colonies in *Africa*, from whence the first Voyage was made to *America*, was abandon'd, their Patrons at *Carthage*, being destroy'd; so with them died the very Memory of such a Discovery, and all Knowledge, that ever such a place had been found out in the World.

FOR as by the fall of *Carthage*, all the depending Colonies, which the *Carthaginians* had planted, fell to ruin, and to an irrecoverable decay, even into perfect oblivion; so it follow'd, by a natural Consequence, that all their farther Discoveries, made by way of Adventure, or otherwise, by private Persons, from those decay'd Colonies, died with them; for if these Colonies, tho' very considerable, died with the fall of their Patrons the *Carthaginians*, well might those Subsequent, or as we may call them second hand Discoveries and Improvements, fall with the destruction of their first undertakers.

NOR is it at all improbable, but that the People, who had, by Shipping, been brought to settle on the Western Coast of *Africa*, by the care, and at the expence of the *Carthaginian* Merchants, or at the expence of the Public; suppose by the Hands of that great pursuer of new Discoveries, *Hanno*, who I take to be the *Carthaginian* Sir *Walter Raleigh*, as afterwards Sir *Walter Raleigh* was call'd the *English Hanno*; I say it is not improbable, but that when *Hanno*, their Protector, was slain, the *Carthaginian* Republick overthrown, and the City of *Carthage* it self destroy'd, the Inhabitants of some or other of these Settlements, being

ing made desperate by their Calamities, might embark at all hazards for fear of their cruel Enemies the *Romans*, and following the People, who they had before happily landed in *America*, might arrive there themselves, and make as effectual escape from the *Romans*, as their Ancestors the *Tingitanian Cannanites* did formerly from the Face of *Joshua* the Robber, when they settled at *Tangier*, and began the *Mauritanian Kingdoms of Afric*.

AND this may be the more probable, from the Similitude of Manners and Customs, between the *Carthaginians* and the *Americans*; many of the *Carthaginian* Customs; and some say many of their very Words being retain'd among the *Americans*, even to the time that the *Spaniards*, under the Great *Cortex* arriv'd there; particularly, many of their idolatrous Customs, Sacrificings, Conjurings, and other barberous usages in the Worship of their Gods.

IT is too large a Work to enter upon here, but those who are curious enough to search into those things, may observe, that the Heathen Temples, erected at *Mexico*, and at *Cusco*, with the manner of their Sacrifices, had a great resemblance of, and affinity to the same Rites among the *Numidians* and *Carthaginians*.

ABOVE all, the antient Forms of Government by the *Inca's* of *Peru*, the Customs and Usages of *Attabalipa*, the *Peruvian* King; their Registers, Archives, and Laws, were so strangely Simular, and such strong Resemblance to the Courts and Governments of the *Numidian*, and *Mauritanian* Courts, that it Legitimizes their descent from them, as much as any thing of that kind, and so remote in time can be suppos'd to do.

BUT besides all this, the *Peruvians* especially, and the *Mexicans* also, but especially the former, had many antient Traditions, and traditional Pro-

phacies among them, which plainly related to the *Carthaginian* Nation, tho' the vast distance of Time, Ignorance of the People, and entire want of the use of Letters, obliterated these remains, so as to make them not legible to themselves, and but very little to the *European* Nations, which came so long after them.

T H E R E are some difficulties started about their Transportation from *Africa* to *America*, the carrying over with them Women and Children, the carrying living Creatures, Beasts of Prey, and the like, the length of the Voyage, the Ignorance in Navigation, and the want of Ships, all which are easily answer'd, as follows, and with that I shall dismiss the Subject.

T H E Shipping of the *Carthaginians* was at that time so very considerable, that we find them fitting out large Navies for the War, in which, for a great while they were Superior to the *Romans*; and we find them trading with large Ships to all the Coasts of the *Mediterranean*, and on the West-side of *Africa* and *Europe*, from the Latitude of fifteen to fifty Degrees in the Ocean, and how much farther we are not certain; but the inference I draw from it, is this, Why might not the same Ships, which cou'd cross the Bay of *Biscay*, the Bay of *Cadiz*, and the *Mediterranean* Sea, from *Carthage* to *Sardinia*, and *Marseilles*, which are all turbulent, outragious, and dangerous Seas, as well pass those so much more pacifick Seas, from the *Cape de Verd* Islands to the *Caribbees*, or to the *Cape St. Augustine* on the Coast of *Brasil*, where most of the way they have a Trade Wind, or a strong Current, or both, to favour them, with a quick Passage, as well as a safe? Why not as well as it has been possible for Men to go from *Barbadoes* to *Jamaica*; nay, from *Jamaica* to the *Honduras* in a Ship's long Boat, nay even in a Pinnace, without
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any Deck or Shelter, or room to stow Provisions or Water, more than for two or three Days.

I F then the Passage, which we know was practicable, might be thus perform'd, why shou'd it be impracticable for them to carry with them Women, Children, Fowles, or any other Creatures, at least any such as were found in *America*, when it was last discover'd.

I N order, however, to make these things easy to the Understanding, I desire my Reader to take notice, that I am not supposing, that this Discovery was merely accidental, by some Ship being driven off to Sea in a Tempest, and hurry'd away to the Coast of *America* by the stress of Weather, without any previous design, tho' even that part is far from impossible.

B U T I suppose the Voyage to be perform'd upon a settled design of searching after new Discoveries; That the Vessel, so fitted out for such a design, might be set out at some of the Carthaginian Settlements on the Coast of *Afric*, suppose about the River *Senegal*, that is to say, the Mouth of the River *Niger*, or from the *Cape de Verd* Islands.

Y O U may allow, if you please, that some other Ship, bound from the Shore of *Afric*, to those Islands, had first been driven so far to the Westward, as to have discovered some of the Mountains of *America* at a great distance; but not thinking fit to venture any farther, had made the best of their way back as soon as Wind and Weather wou'd admit, but brought the News with them that there was Land to be seen that way, that there was a new World, and that whoever pleas'd to make the Adventure might find new Countries for Commerce.

T H A T this News shou'd fire the Minds of a Nation, naturally enclin'd to Adventures, and new Discoveries, wou'd be much less matter of Wonder

Wonder, than it wou'd be that they shou'd hear of it without any motion, or any stirring up of their Curiosity for the attempt; but that the attempt was feizable, I see nothing of room for an Objection; they whose Ships were able to keep the Sea in such Voyages, which they really did perform; and on such occasions as they were oblig'd to do when driven out of their knowledge, as above; might certainly be able to perform such a Voyage as this, in a fair Weather Sea, a Trade Wind, and a Leeward Current; so that in a Word the difficulty was nothing; nor can I make any doubt, that the *Carthaginian* Merchants did perform the Voyage, and settled themselves in *America*, when *Carthage* being destroy'd by the *Romans*, they were abandon'd to Want and Despair; than I make a doubt whether *Carthage* was destroy'd or no. As for their carrying over wild Beasts, or the manner how wild Beasts might come into *America*, I think as easy to explain as all the rest; but shall not enter into it here, being foreign to our present purpose.

I SHALL conclude this Chapter with going back to what I was upon, at the beginning of it; namely, the Product of *Africa* when under the *Carthaginian* Government; by which the Merchants of *Carthage* were supply'd for Exportation to foreign Countries, and in return for which they brought back the growth and Manufactures of those Countries to which they were Exported.

I HAVE mention'd already four very material Articles (*viz.*) Corn, Wine, Salt, and Oil, these they had in great quantity, especially Corn, and Oil, and were able to supply all the Northern parts of the World with them; but especially the Islands of the Lesser *Asia*, and the *Archipelagoe*, the Provinces of *Greece*, and in times of Peace *Italy* it self.

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BUT this was not all ; They had in the next place Iron and Copper ; the last was not only the best of its kind in the World, but if I mistake not, the only place in the World where fine Copper was found. This Copper was carry'd, in particular, to *Corinth*, where the *Lapis Calaminaris* being found, they melted the Copper, and produc'd the Brass, which in those Days was of so much Value, as to be equal to Gold. Hence, no doubt, *Solomon* supplied himself with Brass for the famous Utensils of the Temple ; where it is said the Brass was without weight ; that is to say, the quantity was so great it could not be cast up : And hence the *Corinthian* Brass was esteem'd the most precious of any other kind. As to the Iron, it was found in *Numidia*, and Exported to *Italy*, to *Greece*, and to *Spain* ; and was in those Days very valuable and useful.

BESIDES these, they had a very great quantity of Figs, Almonds Raisins, Limons, Pomegranates, and other Fruit ; all which they exported in Merchandize, besides the quantities which they consumed at home.

THEY had also a great Trade in Horses ; which in times of Peace they sent over to *Sicily*, *Sardinia*, and *Italy* ; also into *Greece*, and into *Spain* ; and the fine breed of *Spanish* Jennets, which are to this Day so valuable in *Spain*, are said to be produc'd first from the Race of the *Numidians* Horses, which were at that time esteem'd the finest and swiftest in the World.

NEXT to this, They had great quantities of Honey, and Wax ; the first, of which, was at that time an extraordinary Article of Merchandize, there being no such thing as Sugar then known in the World.

WE have some Reason to think they had also Rice, a sort of Product, which we do not read

read much of in those times, tho' since it is become very valuable.

THESE particular Merchandizes were the product of the inland Countries in general; but besides these they had several other things, which they fetch'd from the remoter Coasts, and were to be had in this or that particular Country only; as Civet, Emeralds, and Balm, from *Ethiopia*; Gold and Elephants Teeth, from the Coast of the West towards the *Cape de Verd*; Lyons, Leopards, Tygers, and Ostriches, from the Desarts of *Mauritania*.

Now to look back upon all these things, 'tis evident they not only were at that time the product of *Africa*, but they are so still, and may be recover'd were numbers of People to be found at home to propagate them, they wou'd, I say, be recover'd to as great a degree as ever; for to this Day the *French*, the *Genoese*, and the *Spaniards*, fetch great quantities of Corn, Oil, Salt, Wax, and Honey from *Barbary*; nor wou'd the Wine, the Almonds, Figs, Limons, &c. be less valuable, but that *Spain*, *France*, and *Italy*, abound in all those things themselves.

As to the *Copper*, the *Gold*, the *Iron*, the *Civet*, the *Emeralds*, and the *Wax*, they are all to this Day as valuable there as ever; and are the only, or chief Articles of Trade which they have among them. But all together shew us, how great an Improvement of Trade it might be to the World to have the Continent of *Africa* put into the possession of the diligent industrious Nations of *Europe*, who were able, and had a Genius apt to cultivate the Soil, and raise the Product to the same height, which it may be, and has been at: But of that by it self.



C H A P. X.

Of the state of Trade and Discovery. after the ruin of Tyre and Carthage; and how Commerce went back to its Original, and began again only as Nature and the Laws of Necessity directed.

T H E being destroy'd by *Alexander the Great*, as has been distinctly accounted for; one effect was, that the Trade between *Persia*, *Armenia*, and *India*, on the one Hand; The Merchants of *Tyre*, and by their means *Europe* and *Africa* on the other, was entirely interrupted, and put to an end; that is to say, the Commerce of the *Indies* with *Europe* and *Africa*, was put to an end.

THE Commerce of the *Indies*, and of *Persia*, was from the beginning a Trade in Silks, and fine Works in embroidery of Gold and Silver; as also in Spices and choice Gums, Ointments, Drugs, &c. Hence the *Babylonish* Garment, stolen by *Achan*, was suppos'd to be a Robe of Silk Embroidered with Gold. Hence the fetching Gold from *Ophir*, said to be the Island of *Sumatra*, was a Trade, tho' enter'd into by King *Solomon*, practis'd long before by the *Tyrians*: And from this beginning, the Trade both of *India*, and *Persia*, is to this Day carry'd on, and is still a Trade in raw and wrought Silks, Spices, Drugs, Perfumes, &c.

THIS Commerce, as I have said, was certainly began by the Merchants of *Tyre*, and may be suppos'd to be carry'd on thus, before *Solomon's* Days long enough. (1) The *Tyrians* had a Trade with *Persia*, and consequently with *Bactria* and *Kathay*,

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which is *Tartary* and *India*; which Trade was carry'd on by Land, whether by Caravans from *Babylon*, (as is now the practice, from *Bagdat*, from *Tauris*, and from *Bassora*) to *Aleppo*, or whether, by ordinary Carriage, the Desarts perhaps being at that time better inhabited; that part we cannot with any certainty be assured of.

By this Land conveyance they receiv'd all the rich Manufactures of *Asia*, the Product of those various Countries, of which, the Silk was the special peculiar growth. The Scripture is elegant in describing the Correspondences of *Tyre* with these Nations, thereby to magnify the terror of her downfall, when the Prophet *Ezekiel* foretold her ruin by *Nebuchadnezzar*, *Ezek.* xxvii. 6,

- I. IN her Shipping; her very Oars or Benches, or Banks for Oars, according to *Bochart*, *Pool*, and others, were so curious and costly, that they were made of the finest Wood, to wit, *Box* and *Pine*; it was fetch'd from the Isles of *Chittim*, that is to say, from the *Ægean Sea*, and inlay'd with Ivory when it came to be wrought.
- II. THEIR Sails; or as it is well expounded, the Auning or Tilas which they us'd to cover their Vessels with, like as Tarpaulins are us'd now; because, in those Days, their Ships, as they call'd them, had no Decks; so extravagantly proud and vain were they, that these were made of fine Embroidery and Needle-work, and of the finest Colours, dyed with costly Ingredients; which fine work'd Linen, 'tis said expressly, came from *Egypt*, v. 7.
- III. THEIR Merchandizes were fetch'd from all the remotest parts of the World; as it is most emphatically

emphatically describ'd in the same Prophecy. Silver, Iron, Tin, and Lead, were brought by *Tarshish*, that is, by the Sea; and this is understood by the Learned to be from their Colonies of *Cadiz* in *Spain*, *Carthage* in *Afric*, and even from *Britain* it self: From whence it is known, and our own Histories confirm it, that the *Phœnicians* fetch'd Tin, Lead, and Coal; and as for Silver and Iron they had it from *Spain* and *Africa*, where they had rich Mines of both.

B R A S S, is represented as coming from *Greece*, [verse 13.] from *Javan*, *Tubal*, and *Meshech*; which is particularly the Country of *Greece*, where, as I noted before, they melted down the *African* Copper, and made it into Brass, by the mixture of the *Lapis Calaminaris*, which they found in *Peleponnesus*, and other parts of the Country, call'd now the *Morea*. Then they were supply'd with Slaves, as well Men, as Women and Children, from *Meshech* and *Tubal*, (*viz.*) from the Countries of *Mingrelia*, *Colchus*, *Cappadocia*, on the *Euxine*, and the Shores of *Georgia*, on the *Caspian* Sea, &c.

T H E Y of the House of *Togarmah*, that is *Armenia*, brought them fine Horses and Mules, with Horsemen, that is Grooms, who had skill to break and to manage them, and Horse-breeders Men enur'd to Horses, *verse* 14.

[*Verse* 15.] **T H E** Men of *Dedan* brought them Ivory, and Ebony; This was the Country of *Arabia Felix*, where, tho' they had no *Elephants* of their own, they had the Ivory from the *Mogul's* Country on the East, or the *Ethiopian* Country on the West; where both Ivory and Ebony abounds to this Day.

[Verse 16.] SYRIA was thy Merchant by reason of the multitude of the Wares of thy making; This intimates plainly, that the Merchants of Tyre employ'd the People of the Countries round them in Manufactures; such as Weaving fine Linens, Dying Blue, and Purple, and Scarlet, working with the Needle, fine Embroideries, &c. also carving and cutting in Wood, in Ivory, in Metals, in Stone, and in Jewels, such as Emeralds, in particular, brought out of Ethiopia, Agate and Coral brought from Spain, Carthage, &c.

[Verse 17.] THEY had their finest Wheat, and Honey, and Oil, and Balm, from the Israelites, whose Country flow'd with Milk and Honey, and whom, God himself says he fed with the finest of the Wheat, Psalm lxxxi. 16.

[Verse 22. to the 24.] THE Merchants of Sheba, and Raamah [Arabia] and all the Princes of Kedar, Haran, Canneh, and Eden, Asser, and Chilmad: These Countries include Assyria and Persia, and the Trade which the Arabians had with India: These all traded in the Fairs of Tyre, with their rich Silks, blue Cloths, rich Apparel, and brodered Work (Babylonish Garments, as above) Spices, and precious Stones, of all sorts, and Gold.

HERE is the whole Trade of Persia and India describ'd with the greatest Elegance imaginable; and tho' it is so long ago, we find the same Trade remains still, and is carry'd on still from the same Countries, tho' not at the City of Tyre, and her Fairs and Markets, yet by the same Places and Countries, as Persia, Armenia, India, and Arabia, whence

whence, to this Day, the Merchants of *Europe* fetch the same Goods, (*viz.*) rich Silks, fine embroidered Works, painted Chints, &c. also Diamonds, Pearl, and Emeralds, Spices, Balm, and rich Drugs, Perfumes, and Gums, and many other Goods, perhaps then not fully discovered.

I SHALL trouble my Reader with no more Scripture Digression; tho', I think, this cannot be call'd a Digression; but I come back to the Case in Hand. All these things, were at first, brought by Land to the City of *Tyre*, or at least, being brought by Sea to the Gulph of *Persia*, were afterwards brought over Land by Caravans; and that I understand to be meant by the Merchants of *Sheba* and *Dedan*, who were certainly *Arabians* bordering on the South Coast, and who fetch'd those Goods, by Water, from the Coast of *India*; nay from the River *Indus*, the same Country which we now call *Guzurratte* and *Suratte*, *Bombay*, and the Coast of *Malabar*; and which were brought down to those Coasts and Rivers by Land, from *Agra*, *Termed*, *Labore*, and other Towns and Countries bordering on the great Rivers *Oxus* and *Ganges*; from whence they receiv'd the Riches of the farther *India*, namely, the Diamonds of *Golconda*, the Gold of *Archim*, *Sumatra*, (the same as *Ophir*) and the Spices of *Java*, and the *Moluccas*.

Now all these, I say, came to *Tyre* by Land, that is to say, by Caravans; and 'tis evident they did so for many Ages, and even to the time of the Siege and taking of their City by the *Affyrian* Monarch: But yet many Years before that, the adventuring Merchants of *Tyre* had made attempts to go directly to those Countries by Sea; and accordingly, by permission of the King of *Egypt*, had fitted out Ships in the *Red Sea*; who, as I have said already, coasted the whole Southern part of the World, till then unknown.

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THAT this was so is evident, in that, when *Solomon* had a mind to dip into that Trade, he hir'd Ships of *Hiram* the King of *Tyre*; and they are call'd *Hiram's Ships*, 1 *Kings* x. 11. The Navy also of *Hiram* the King of *Tyre* brought *Almog Trees*, and *precious Stones*, as well as Gold from *Ophir*. It is indeed said, in the Chapter preceding, *verse* 26. *Solomon* made a Navy of Ships in *Ezion Geber*, and *Hiram* sent in that Navy his Servants, Shipmen that had knowledge of the Sea; the matter was this, (*viz.*) that *Solomon* being posselt of *Ezion Geber*, which was a good Sea-port, on the side of the *Red Sea*, in the Country of *Idumæa* or *Edom*, he gave *Hiram* leave to build Ships of Burthen there, and then hir'd them of him to go to the *East Indies*.

AND this he did because he found the *Tyrians* had us'd that Trade before, and that it was very much to their advantage; and now, the Port belonging to him (*King Solomon*) *Hiram* could not do it without his leave.

BUT yet, after this Trade was found out, the Goods brought back were to be carryed a great way by Land-carriage, even thro' all the Wilderness, the same which the *Israelites* had long wandered in before they came to the Land of *Canaan*; thro' all this Country, I say, the Goods were to be brought over Land before they came to *Solomon*: And we find *Solomon* establiſh'd a rate of Carriage afterwards, to perform this, 1 *Kings* x. 29. a Chariot for six hundred *Shekels*, and a Horse for one hundred and fifty; and thus the Trade was carryed on for some time; for tho' *Solomon* was a wise King he was but a young Merchant.

THIS laid the foundation of what afterwards was considerably improv'd; namely, of fetching all the Spices and Jewels, Silks and Drugs, &c. (the product of *India*) by Sea to *Sues*, a Sea-port, on the utmost point Northward of the *Red Sea*;

from

from whence they were carry'd, by Land, to *Damietta*, and afterwards to *Alexandria*, and thence again, by Sea, to all the known Ports or trading Towns of *Europe*; and this had been *Solomon's* best way then. But since *Solomon* was so wise a Man, so great a Prince, so inspir'd a Genius, how came it, that he did not understand the frame and figure of the Globe, the situation of Places; how the Sea and the Land were extended, how the former was every where joyn'd; and that consequently the communication of Water was to be found out to all parts of the Earth, inland Lakes excepted? Had he known this, he might have built his Ships at *Tyre*, and sailed about as we do now.

THIS important Question brings me to the Subject, which is the main motive of this Work. This Wisdom was hid from those Ages, even from *Solomon* himself; and this makes me say, tho' he was a wise Man, he was but a young Merchant. No, no, this Knowledge was left for Discovery; it was to be a whet to the Industry of future Times; it was to be search'd out at infinite Hazard by an Art [Navigation] which they knew little of, I mean, a Mathematical Navigation, which the World, at that time, understood nothing of; for the Mathematicks were not concern'd in the Navigation for many Ages after. But to return to the Trade, as it then was.

Thus stood the Trade of the World when *Tyre* was first destroy'd, (*viz.*) by *Nebuchadnezzar*; nor, as I have said, did his taking that City give any great blow to the Commerce itself; for the Merchants, and wealthy Citizens, having transported themselves, and their Goods, to *Cyprus*, *Sicily*, *Crete*, to *Carthage*, and other places, which were their own Colonies, as has been noted before, they found means to carry on their business; till the rage of the War was over, and the *Assyrian* Tyrant

Tyrant was dead; and then they came back, rebuilt their City and Port, and became infinitely greater, richer, and stronger than they were before; and this second greatness continued several hundred Years, till the last fatal Attack, made upon them, by *Alexander the Great*, which put a final end, not to the City only, but even to the name of a *Phœnician*, or of a Merchant, among them.

THIS indeed was not a stop to their Trade, but an utter ruin to it; for *Alexander* took the City by Storm, murther'd 26000 of the Citizens in the heat of Blood, hang'd 2000 of the most wealthy Merchants, upon Gibbets or Crosses, all on a row, for six Miles in length, on the Sea-shore; in a Word, he resolv'd, in his tyrannic Rage, to make himself a Terror to the rest of the World, and to make *Tyre* an Example of it, to terrify any other City that shou'd dare to stand out against him; and as to them, he did every thing he could to blot out the remembrance of the City of *Tyre* from under Heaven, and not to leave the name of a *Tyrian* Merchant remaining in the World; and all in revenge for their refusing to let him peaceably into their City; which if they had done, it was said, he resolv'd to have done the same, having vow'd the City a Sacrifice to his Fury, upon some former resentments not made public.

BUT when the heat, or fire, of his Anger was thus quench'd, by the Blood of such a multitude of innocent People, and the ruin of the most flourishing City in the World; the seat of Trade, and the center of all foreign Negotiation, he soon relented when it was too late; he was convinc'd what a blow he had strook to the general Correspondence of Mankind; and how he had, as it were, put a stop to the Trade of the World; and finding it absolutely necessary to restore things

things, as near as might be, to their proper and natural Chanel, especially for preserving the important Trade of *Egypt*, and the *Indies*; he resolves to erect a new *Tyre*, for an Emporium of Commerce, in the mouth of the great River *Nile*; which he did, and call'd it after his own Name *Alexandria*.

Now tho' he could never, by all the invitations he made to the Merchants of all Nations, to come and settle there, and the privileges he gave them, and promises of greater, which he made them, bring the Trade of *Tyre* to center at *Alexandria*, as he expected; yet the Port of *Suez*, in the *Red Sea*, call'd at that time *Suz* or *Elim*, and being likewise enlarg'd by him, standing well to receive the Trade from the *East-Indies*; and there being no other Port in the World for it, these Merchandizes being of course now brought over Land to the *Nile*, and so by the *Nile* to his new City of *Alexandria*, the Trade came in time, by the same course of things, to center naturally at *Alexandria*, and made it a place of very great Business, tho' nothing like the antient City of *Tyre* which he had destroyed; the destruction of which was so mortal a blow to the Trade of the World, at that time, that it never recovered itself; that is to say, it never came to fix in one place afterwards; but divided, and ran confused into several Channels: In all which several Channels I shall trace it as we find it in History; now fixt and flourishing here, and then there; now unfixt and remov'd by the Wars, and by the cruelty of conquering Princes, and States; till at last the Northern Nations, namely, the *Portuguese*, then the *Dutch*, and now the *English*, finding out and pursuing the Trade to *India*, by a passage round the Sea-coast of *Africa*, all that branch of Trade from *India* to the *Red Sea* is forgotten and dropt out of the World; whether

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it has been the worse or the better for *Europe*, remains to be spoken of by itself.

THE ruin of *Tyre*, I mean this last and fatal Destruction of it, as a trading City happen'd in the Year of the World 3618, about 330 Years before Christ. The City was rebuilt indeed afterwards, and became considerable, but not for Trade, so that I shall never have occasion to name it any more on that account, I say, its final ruin was *Ann. Mundi* 3618, after which the Trade, which was carry'd on there, as the center of the World's Commerce, divided itself, and run in different Channels as follows.

The *East-India* Trade, as I have said, was carry'd on by the *Egyptians* and *Arabians*; whose Ships, bringing the *East-India* Goods, such as wrought Silks, Spices, Drugs, Diamonds, Pearl, Callicoës, dying Stuffs, Salt Peter, Indigo, red Earth, &c. being brought to *Sues*, and thence to *Alexandria*, the *Venetians* got into that port, and carry'd those Goods from thence all over the Northern World.

That part of the Trade of *India* Goods, which came from the *Ganges*, and the Kingdom of *Bengal*, into *Persia*, was brought to *Samareand*, *Persepolis*, and other Cities and Countries near the *Caspian* Sea; and from thence were landed again in *Georgia*, and carry'd over Land to *Erzurum*, and to *Trapezond*, on the Banks of the *Euxine* Sea; and from thence again were brought into the *Mediterranean*; and thus the City of *Corinth* became a mighty center for Commerce, many of the *Tyrian* Merchants, who fled from their City, before *Alexander* had invested it, having settled at *Corinth*, and by their Correspondence with their old Friends in *Persia*, drawing a large Chanel of Trade that way made *Corinth* a great, populous, trading, and consequently a wealthy City.

ON the other hand, The Western branch of Commerce, which the Merchants of *Tyre* carry'd on, and by which they both exported and dispers'd that excessive quantity of Goods which they imported from *India* and *Persia*, as above; and brought back in return the product of *Europe* and *Africa*: This, which I say, was properly the Western branch of their Trade was establish'd chiefly at *Carthage* in *Africa*, *Cadiz* in *Spain*, and at *Syracusa* and *Palermo* in *Sicily*, all of them *Phœnician* Colonies; and these receiv'd no great shock in the ruin of *Tyre*, only a stop of their Commerce for the present.

BUT it's worth observing here, and it is one of the Reasons why I have enter'd so far into this particular; I say, 'tis worth observing how War, Tyranny, and Ambition, those Enemies to all peaceable Dispositions have continual persecuted Trade; and how often the industrious trading part of the World has been beggar'd and impoverish'd by the violence and fury of Arms.

As Trade enriches the World, and Industry settles and establishes People and Nations, so War, Victory, and Conquest, have been the destroyers of every good thing; the Soldier has always been the plunderer of the industrious Merchant. How vainly do Men boast of their valour and gallantry in Arms, crown themselves with Laurel, and assume the name of Great, for Actions which instead of recommending their Fame to Posterity, and immortalizing their Memory, ought to make their very Names stink in the Nostrils of all great and wise Men, and shou'd make it odious so much as to read of them?

THIS is exemplified, not in the case of *Alexandria* and the City of *Tyre* only, but in all places of note, that I have now been nameing; and especially in this, That all these flourishing places, to

wit, *Corinth*, *Alexandria*, and even *Carthage* itself, have been pursued by the rage and fury of the Wars, and by the cruelty and ambition of Princes, not to loss and disaster only, but, in a word, to final ruin and destruction: So that now, not the Inhabitants only, but the very places where some of the greatest Cities of Commerce stood, are not to be found, and the Names of them, are in a manner, perish'd from the Earth.

THIS was the fate of *Carthage*, and almost all the Cities on the North and West Coast of *Africa*. And with this ruin of Cities Trade felt the very pangs of Death, and especially with that of *Carthage*; and likewise *Corinth*, seem'd to have receiv'd so mortal a blow, as that for some Ages, we find very few remains of the antient Commerce, which was so large, so flourishing, and made the World so rich, even from that one City.

THE whole Estate of the *Carthaginian* and *Græcian* Empires was swallow'd up in the Conquest of the *Romans*; a Nation inspir'd with the glory of Arms, and puff'd up with their innumerable Triumphs over other Nations; but not at all addicted to the true glories of Peace, the improvement of the industrious, the employment of the Poor, the encrease of Navigation and Commerce, or the making new Discoveries, in order to the better cultivating abandon'd Countries, or planting unpeopled Kingdoms in the World.

WITH the ruin of *Carthage*, all the Commerce of the World seem'd to be at a stand. Navigation stood stock still; the Ships were every where burnt and destroy'd, the experienc'd Seamen either kill'd in the several engagements at Sea against the *Romans*, or made Slaves, and sold for drudgery to the Conquerors, without any regard to their being at that time the usefulest part of Mankind.

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THE Seamen which the *Romans* had, were few, unexperienc'd, and unapt to apply to Trade; nor had they any considerable Trade to employ them in; the adventurous Temper, the genius for Discovery, the Application to improvement, and planting, and cultivating, which was so particular to, and so much the glory of the *Carthaginians* died with them; the search after new Coasts, and Countries, and building new Cities, and Sea-ports for Traffic: The earnest thirst after a trading, navigating Glory, fell with the famous *Hanno*, who I justly call, the Sir *Walter Raleigh* of the *Carthaginian* Empire.

ALL the young Settlements, newly begun; the Plantations, and new built Cities; the Colonies and People sunk into ruin, like Infants thrown out to the Wolf, and which die for want of the Breast to suckle and nourish them, their Mother *Carthage* being cut off and destroy'd.

THE *India* and *Persian* Trade felt the blow. The Merchants of *Persia* brought their Goods to the usual Places; but the Factors had no Commissions, their employers were gone, consumed in the fire of War: The Ships came to *Sues*, in the *Red-Sea*, and the Goods, perhaps, might be landed in safety; but no buyers appear'd; the Ships which us'd to throng the noble Haven of *Alexandria* came not, for they were sacrific'd to the *Roman* Fury, in the destruction of *Carthage*.

THE returns, which usually came back in *European* Merchandizes, such as are mention'd before, the Silver, Tin, Iron, Lead, and Brass; the Corn, and Fruit, the Wine, the Oil, these came not; the Chanel, by which they flow'd, being dam'd up by the desolation of the War; in a word, *Alexander the Great*, and *Scipio*, were the two Furies of the World, that overwhelm'd Commerce in the rubbish of their Conquests; and never concern'd themselves

selves with the loss which all the World felt by their Folly and Rage; nay, which we may say, some of the World feels to this Day.

How Commerce, by the mere guidance of Nature, reviv'd out of all these Desolations; by what Methods, by what Degrees, and particularly, by what People it began to rise again *Phœnix like*, out of its own Ashes; what several changes and fates it has undergone, and how at length it has, together with its Sister Navigation, risen up to the glorious Magnitude which we now see it arriv'd to; what assistance it has had; what Enemies; what Dangers it has escap'd; what Difficulties it run thro', and what Dangers are yet in the way of its future Prosperity, will be farther enquir'd into in the following part of this great Undertaking.



CHAP. XI.

Of the Blow given to Trade by the ruin of Corinth and Carthage. The new turn Trade took in the succeeding Ages; and by what slow degrees it began to revive in the World, and in what Places.

AS the Roman Conquest had checkt, and almost suppress'd Commerce, so it greatly discourag'd Navigation. As I said before, the Trade being ruin'd, and the Sailors destroy'd, the Ships, had they been left, were generally useless or unemploy'd. As for the *Carthaginians*, the very Name was sunk; they were no more a City, much less a Government; their Ships of War were all burnt; their

their Ships for Trade had neither Merchant to employ them, or Sailors to navigate them: In a word, Trade and Navigation seem'd to be both struck as with a dead Palsy both at once; and we ought to look at them both as in a worse condition for Improvements than they were in 1000 Years before, I mean when *Tyrus* was taken by the *Assyrian* King: Like a Man running a Race, who by some unhappy disaster, or mistake, has his Ground to run all over again, and with disadvantage too; so that now there was no prospect of Recovery, Trade had no view of a Restoration.

WHEN *Nebuchadnezzar* took *Tyre*, the dispers'd Citizens had a retreat, from whence to recover their Trade again. When *Alexander the Great* ruin'd it, he himself, as noted above, took care of the Commerce, by erecting *Alexandria* as a Staple of Trade to restore it to the World. But when *Carthage* was destroy'd, the Victors, thoughtless of the public good of Mankind, and unconcern'd for Trade, left her utterly abandon'd and forsaken; no Patron left to restore her flourishing Government; they took neither any care for it themselves, or left any one else to do it; but in short, all things were left to mere Nature, and Trade was to return only as the consequence of Mens finding it needful to correspond with one another.

THE first appearance of any thing that deserv'd the name of Commerce, after the Destruction of the *Carthaginians*, was the necessary supplies of Corn which were wanted for the support of the City of *Rome*: This employ'd some Shipping to the Coast of *Africa*, and to *Egypt*, and *Syria*, according as the Consuls, who had the care of those things, directed; in which Case, the Corn was not so much an Article of Trade, as a payment of Tribute to the State from the Countries

tries whence it came. The Consuls sending Orders to the Proconsuls, and Governours of Provinces, to send such and such supplies of Corn for the use of the Senate of *Rome*, as was required; and to pay for the same out of the ordinary Tribute. This frequently oblig'd the said Proconsuls to hire Ships for that Service, and kept up in some small measure the employment of Ships and Seamen.

THIS was the Case of *St. Paul*, when on his Voyage to *Rome*, he first embark'd in a Ship belonging to *Adramyttium*, which was a City near the *Hellepont*, in the antient *Greece*; and afterwards to embark in another Ship loaden with Corn, in the Island of *Crete*, or *Candia*. But this went but a little way towards reviving of that vast Commerce which was destroy'd by the ruin of the *Carthaginians*.

THE next discovery of Trade, or any thing which look'd like it, was the necessity which the Merchants of *India* and *Persia* found themselves in, of selling or venting their Goods, which they or the *Egyptians* for them, brought constantly up the *Red Sea* to *Egypt*; and which from thence, being carry'd to *Alexandria*, were before that time bought up there by the *Carthaginian* Merchants, and carry'd in their own Ships to *Carthage*, and from thence sold and exported by them to all the parts of the World that were known at that time: But these *Carthaginian* Merchants now failing to come to Market, their City being burnt and destroy'd, and their Shipping also; the *Indian* and *Persian* Merchandizes were left unfold, and perhaps the Merchants who brought them ruin'd and undone; being not able to find any Market wherein to dispose of the Goods they brought, or to make returns in such Goods as they had occasion for in their own Country.

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THIS caused the Merchants of *Alexandria*, by degrees, to seek and find out a Market for their Goods wherever they could have it; and particularly the Cities on the Coasts of *Italy*, and *Gaul*, [*France*] the Islands of the Lesser *Asia*, and the Shores of *Greece*, by little and little became acquainted with the Trade, and dealt in *Alexandria*, with the Merchants of *India*, or rather with the *Arabians* and *Persians*; for they were indeed the Persons who brought the Goods to *Egypt*.

N. B. Here it is to be noted, that even then, and ever since then to this Day, the Indian and Arabian Merchants, who have brought their Goods this way for a Market, have been unconcern'd in the Wars, and Overturnings, which the ambition of Men have embroil'd the European World with; on the contrary, they have been a peaceable trading People, who have only sought to push on their business in a quiet manner, selling their Goods, and taking back either such Money as they could get, or such Goods as were vendible in their own Country. And thus the Armenians and Georgians, (who are the same kind of People) act to this Day; coming with their Bales of Silk, their Drugs and Galls, Grograms, Camel's Hair, and other Goods, to Aleppo, to Scandaroon, or Little Alexandria; and others of them, to the Gulph of Persia, to the famous City of Ormus, and thence into Egypt, and to Alexandria itself.

THESE Merchants, no doubt, were for a while under great Disappointments when they miss'd their old Correspondents, the Carthaginians, who at certain Seasons fail'd not to meet them at *Alexandria* to buy their Goods. What courses they took to sell their Wares, at first, we cannot

not, at this distance, give a particular Account of; but this we find Reason to conclude from some circumstances of Trade, which follow'd; namely, that this after the *Persian* Merchants were found at *Corinth*, whither they came from *Trapezond*, and from *Tripoli*, in *Cappadocia*, on the *Euxine* Sea; bringing their Merchandizes down among the *Gracians*; and which they did, with such good success, that in a few Years *Corinth* reviv'd and became a populous, rich, and trading City, especially in that part, which might then be call'd the *Indian* Trade, as we now call it the *Turkey* Trade.

IN the mean time there sprung up a small infant Correspondence between the Citizens of *Marseilles*, and those of *Alexandria*. *Marseilles* was a City then under the *Roman* Government, and so was not liable to the Devastation which *Corinth* and *Carthage* had already suffer'd; and therefore the Citizens and Merchants of *Marseilles* were most likely to keep and carry on the Commerce they had begun, and both the City of *Alexandria* itself, as well as *Marseilles*, grew rich, and advanc'd both in Wealth and People by it, and which was more than all, in Shipping; for the *Marseillians* encourag'd by the Trade in Spices, which was the chief of the *Alexandrian* branch of the *Indian* Commerce; I say, the *Marseillian* Merchants, by being possessed of the Spice Trade, became, in a few Years, the principal Merchants of the *Roman* Empire, as the Merchants of *Corinth* had been for the Silks and fine Manufactures of *Persia* and *Armenia*; with this difference afterwards, that the City of *Corinth* having been destroy'd by the Consul *Lucius Mummius*, in the Year of *Rome* 607, was poor, and held it but a little while. But *Marseilles* held it, and flourish'd in the Trade even till the decay of the *Roman* Empire itself. When the

Lombards

Lombards and other *Italians*, flying to the Islands of the *Adriatick* Sea, from the fury of the Northern Nations, who broke in upon *Italy*, and defending themselves there during all the inundations, whether of the *Goths*, *Vandals*, or other *Barbarians*, built a kind of Marine City, and call'd it *Venice*. The Citizens of this new City and State forming themselves into a Government, after the manner of antient *Rome*, (*viz.*) Senate and People, the latter divided into the Nobility and common People, as *Rome* was into the *Plebeij* and *Patricij*, fell unanimously into Trade.

HAVING by their Wisdom and Courage thus establish'd themselves, and being by the situation of their Town oblig'd to carry on all their Correspondence, as well as Commerce by *Sea*, they grew Merchants of Course, and not only put in for a share of this happy Trade, but in time the whole *Roman* Empire themselves feeling the shock of the barbarous Nations, these *Venetians* engross'd it all to themselves, and the *Marseillians*, were also finally excluded; the Spice Trade, and as we may say, the whole *East India* Trade, as to *Europe*, falling into the Hands of the *Venetians*, and remain'd with them till a few Ages ago, when the *Portuguese* found the way to the *Indies* by the Cape of *Good Hope*, of which in its place.

THUS I have brought down the Commerce of that part of the World almost to the present Times; by which it may be seen, how the wisest Nations, for such the Romans were suppos'd to be, have been sometimes mistaken in their Conduct; and how by neglecting to promote and encourage Trade, they have in the event impoverish'd and weaken'd themselves, and at least put from them the only Wealth in the World, and the means, by which, had Trade been supported and nourish'd among them as it ought to have been, they had probably

been better able to have defended themselves against the barbarous Nations, which afterwards over-whelm'd them.

How evident was it, That the Cities of *Tyre*, of *Corinth*, of *Carthage*, and many others acquired their Wealth and Opulence by the growth of their Commerce; and tho' they were indeed overpowered by the Arms of the *Grecian* and *Roman* Emperors, yet it was not but by such a Strength as the World was not able, at that time, to resist; and yet even what a glorious Struggle did they all make with those very Powers, who at the same time were Conquerors of the whole World.

ON the other Hand; How have we seen many small Cities, Governments, and States, support themselves on this Foot? The two States of *Genoa* and *Venice*, which were singly and separately rais'd by Commerce, supporting themselves by their Wealth and naval Power, (both which they acquired by Trade) when the whole *Roman* Empire, of which they were a part, sunk in the Inundations of the barbarous Nations: These *Isay* stood firm, resisted the Torrent of the *Goths*, the *Franks*, the *Vandals*, the *Heruli*, the *Gauls*, and all those furious Nations, and remain flourishing, by the help of Commerce, to this Day.



C H A P. XII.

An Argument from what has been said for engaging the Christian Powers of Europe to root out the Barbarians, and Pirates, and restore the Peace and Commerce of Africa, so profitable to Europe.

HAVING thus mention'd that the *Carthaginian* Empire in those Days was the seat of Trade; and that *Africa*, which was their peculiar Dominion, was in particular a Country enrich'd, peopled, and made powerful by Commerce, it comes in my way of Course to enquire what was its Condition afterwards, what it is now, and what is the Reason, that in a World so inclin'd to Commerce, and so encourag'd to carry it on as this is, and is like to be, this Country of *Africa*, once so great, so furnish'd for and improv'd in Business, is not restor'd to its former Glory and Wealth; and this I shall couch in a very few Words.

AFTER the destruction of *Carthage* the *Romans* kept the possession of the Country, and govern'd it under their Proconsuls for many Ages: Trade receiving no encouragement from them, as I have observ'd already, took a new turn and ran in several Channels, (*viz.*) from *Egypt*, by way of *Alexandria* to *Marseilles*, and afterwards to *Venice* and *Genoa*, and from the *Caspian Sea*, coming thither, by way of the River *Oxus* to *Erzurum*, and so to *Taprezond*, and thence by the
Euxine

Euxine and *Aegean* Seas to *Corinth*; which thereupon reviv'd a little, till that part too was swallow'd up by the *Genoefes*, and the *Venetians*, and with them it remain'd.

As for *Africa*, Tho' *Carthage* was rebuilt, and the Country continu'd extreamly rich, populous, and powerful, to the time of *Justinian*, and latter; yet *Africa* never fell into Trade other than, as I have said, the exporting Corn and Copper, Wax and Salt, which was in itself no great matter.

BUT when the *Roman* Empire declin'd the *Vandals*, the *Goths*, and at length the *Saracens*, over-run this whole Country; and as the *Mahometans* wherever they came rather laid the World waste than cultivated and improv'd it; so here from a peopled, improved, rich, cultivated Soil, a populous, well planted Country, full of large Cities and Towns, and of a rich and thriving People, they brought it to be a wild uninhabited Desert, the Inland part left to mere Nature, and the Sea-coast possess'd by Barbarians, and a Generation of Drones, who declining the honest Industry, which makes the World rich, and encourages Arts and Peace, chose to live by Rapine and Violence; and from this principle turn'd Pirates and High-Sea Robbers: And thus from a beginning upwards of 500 Years old ever since their being expel'd out of *Spain*, they have continued in several Tribes and Nations, and under several Denominations to this Day; such as the *Moors* of *Sallee*, Subjects to the King or Emperors of *Fez* and *Morocco*; the *Turks* of *Algiers* and *Tunis*, and the *Arabians*, for such they were, of *Tripoli* and *Barca*.

THESE wretched crews of Thieves, from low and small beginnings, but encourag'd by Success, have gradually encreas'd at the expence
of

of the trading Christian Nations of *Europe*, whom they have always prey'd upon, till they are grown up to the height of power and strength which we see them arriv'd to at this Time, when they are call'd a Government, nay are treated with as Nations, Common-wealths, and States, Regencies, or what else they please to call themselves, to the reproach of Christendom, and to the infinite loss and discouragement of the Merchants and Navigators of all the Nations about them.

HERE therefore, craving leave to make a Transition from the success of Trade, and the advancing of discovery and improvement in Commerce, of which I have hitherto spoken historically; I say, I shall make a brief Transition to the ruinous condition of this flourishing part of the World call'd *Africa*, how 'tis abandon'd and forsaken of its old and industrious Inhabitants, and is become a Den, not of Lions and Tigers only, the ordinary Inhabitants of the inland Mountains, but of Pirates and Thieves, a kind of wild Beasts infinitely more destructive to the World, and worse Enemies to its prosperity than the most ravenous Beasts of Prey in *Nubia*, or *Libya*, or the banks of the River *Niger*, which runs thro' the most desolate Country in the World.

How the *Africans* at this time live, how they grow every Day more savage and more untractable than before, and how at last they may, if not prevented, become more dangerous than when they possess all the Kingdom of *Spain*, wou'd take up too much time and is also beside my purpose.

BUT how they might be reduc'd, how either brought to the exercise of Arts and Industry, and be made a Blessing to the World; or how conquer'd

conquer'd, extirpated, and the Country clear'd of them, and the Country restor'd to the flourishing, thriving, and trading Figure which it formerly made in the World, or perhaps a greater, to the advantage, not of the Inhabitants only, but of all the Christian Nations near them: This, as it belongs to future improvement in Trade, and future discovery, is exactly within the bounds of my Undertaking.

I HAVE done therefore with dull Antiquity, as to Trade; and tho' it is true I could not call this Work a History; if in discoursing of these great periods in Commerce, (*viz.*) the ruin of *Tyre* and *Carthage*, after which, Trade receiv'd such Shocks, that after them it ran always in other Channels; I say, tho' I could not call it a History unless I had gone back to the beginning of things; and that I hope it has not been an unprofitable Work: So now I shall enter according to my Title into a short account of the Reason and Measures for recovering this lost part of the World, and restoring it to its antient Glory, I mean, as to Trade only to the infinite advantage of its self, and of *Europe* also.

IF the Trade of *Africa* was once so very advantageous; if the Country was once so fruitful; the Nations in it so powerful and populous; the Product of it so rich and valuable, Why shou'd it not be restored to its former Condition, that we in these Parts of the World might reap at least our share of the benefit of it? This is the Question I am next to speak to.

IF the present Inhabitants are not only indolent, negligent, and discouragers of all diligence, and improvements; but Thieves, Robbers, and the worst of Robbers, (*viz.*) Pirates; if they are not only Enemies to God, and to the Christian Religion, but Enemies to Mankind, living like
Beasts

Beasts or Prey upon the Spoil of their innocent and industrious Neighbours; if they are not only Robbers and Pirates, but barbarous Oppressors and Tyrants; murdering, by hard and villainous Usage, the unhappy People [Christians] who fall into their Hands; why shou'd not the trading World rescue their distress'd Brethren from such miserable Captivity, and root those Barbarians off from the Face of the Earth, to restore the Commerce of that Country to the rest of the trading World?

To the reasonableness of this I shall also say something of the practicableness and easiness of bringing it to pass, and leave the rest to Posterity; who, I doubt not, however the shame of neglecting it may be ours, will one time or other have the profit as well as the glory of bringing it to pass.

THE whole force of the Barbarians mustered up together, and that in the most formidable manner that they themselves can represent it, and taken from the best Authors, stands thus.

THE King of *Fez* and *Morocco* are able, bringing Tag and Rag together, to draw out into the Field a very great Army; they tell us, if they join Forces, they may bring together 120000 Men; and this I am to grant, for Argument sake, whether I believe it or no, and the rather because when the Marquis *de Lede*, the late *Spanish* General, landed at *Centa*, with an Army, in the Year 1722, the *Moors* appear'd with a great Army, and attack'd him in his Entrenchments with such obstinacy and fury, that notwithstanding they were repuls'd with great Slaughter; yet the *Spaniards* thought fit to give over the Enterprize, and rerurn to old *Spain*.

BUT those People who make this an Objection shou'd not forget at the same time, that the *Spaniards* were but 12000 Men; that the Season of the Year was advanc'd, and they wanted Provisions;

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that they had at that time Misunderstandings with the *French*, the King of *Great Britain*, and the Emperor; and that the *French*, who it was expected shou'd have join'd them with 12000 Men more declin'd it, envying perhaps the apparent advantage, and the honour of it also to the *Spaniards*.

HAD not these and other Incidents prevented; and on the other Hand, had the Powers of *Europe* joyn'd to form an Army of 50 or 60000 Men to have pursued the glorious Design, how easily wou'd the Barbarians have been overthrown, their Government been extinguish'd, and the very name of *Mahomet* and *Moors* have been driven out of *Barbary*? How easily wou'd the Cities of *Fez*, of *Mequines*, *Morocco*, *Sallee*, and *Santa Cruz*, which are the chief Places the *Moors* hold in that Country have been reduc'd, and the *Negro* Nations, who now make the flower of their Cavalry, been separated from them, and secur'd to the interest of the Invaders? How easily wou'd the Forces of the Country have been broken, and the *Moors* have been as effectually driven out of *Africa* as they were before out of *Spain*, which was done after an Establishment and Settlement there, for above 700 Years?

THIS being done, and the Coasts on the West and North of *Africa* subdued, what could the small States, or popular Governments of *Algier*, *Tunis*, and *Tripoli* signify, to oppose the Conquerors? How apparent was this in the enterprize of the Emperor, *Charles V.* who in a few Days took the whole Kingdom of *Tunis*, but was so just or so weak as to restore it to the King to whom it belong'd before.

WITH the same ease might all those Barbarian Kingdoms be removed, and their People transplanted. A sober, religious, christian, and gallant People from all the Nations of *Europe*,

I mean the Nations which we call Marine Powers; I say, how easily might such a People be planted in their room? A People diligent, industrious, inclin'd to Commerce, inclin'd to improvements, and to cultivate the Earth; then the Soil answering by its fertility, and plentifully rewarding their Labour, how soon wou'd *Africa* become the same noble, rich, and powerful Country, as it was before? Populous, well inhabited, strong, rich, fitted for Trade, exporting to all the Southern parts of *Europe*, Corn, Wine, Oil, Salt, Copper, Iron, Rice, Wax, Honey, Cotton Wool, Sheeps Wooll, *such as the Spanish*; Horses, Drugs, Gums, Balm, wild Beasts, Ostrich Feathers, Furs, and abundance of other Commodities, from the North part only; besides Gold Dust, Elephants Teeth, Slaves, Civet, *Guinea* Grains, and other things, as are now brought from the South; and besides Sugar, Indico, Ginger, Pimento, and all the growth of our *West India* Colonies, which (as has been proved) will not only grow and thrive, but be as easily and plentifully produc'd on the Continent of *Africa*, as they are now in *Brasil*, or in *Barbadoes* and *Jamaica*? The advantage of which, and the consequences of it, I shall enlarge upon hereafter.

How then, is all this beautiful, rich, and wealthy Continent of *Africa*, to the shame, as well as to the infinite loss of the *European* Christian Powers, not only suffer'd to lye uncultivated, and as it were uninhabited, but to be over-run by the Barbarians, who defy Christ, trample underfoot Religion, and exercise continual Robberies and Piracies upon our Trade; and at this time keeping fifty thousand Christians in miserable, and indeed insupportable Slavery?

NAY, let us look back and consider what is to be said of the Years past; is it possible so much as to think, without inexpressible regret, that there lye the Bones of 500,000 poor abandon'd Christian Captives, who have perish'd in the utmost Misery under horrible Cruelties and Oppressions in the tyrannick Hands of those Barbarians; and who, not being able to support the hardship and extremities of their Slavery, have died under it, as a Horse over-wrought, and not able to exert himself to the satisfaction of his cruel Driver, sinks down and dies under his load? I do not say all that Blood cries against us, I mean, by us the Christian Nations who have suffer'd this Calamity to fall upon them; but I say, it calls loudly upon us to revenge the iniquity of the Fathers upon the Children, because they practise the same Cruelty every Day, and above all, to take a just care, for prevention, that no more Christian Slaves, no more of our Brethren and fellow Christians may fall into their Hands.

HERE may occur indeed some material Objections against the practicableness of this; but I am sure none can lye against the reasonableness.

I. How will you prevent the Christian Nations quarrelling about the division of the Conquest, when made, and how will you share it between them?

II. WHAT shall the Country be applyed to, when reduced, and how will it appear to be worth the Reduction?

As to the first, it is true, thro' the avarice of Christians, and the degeneracy of humane Nature; there is such an inclination in the People of all

all Nations and Professions to be jealous of one another, there is such a jarring and clashing of their suppos'd or real Interests, that it is the hardest thing in the World to bring them to unite in the best and most glorious Actions, or in any public Undertaking, how good, how practicable, how feasible soever; nay, and tho' it be for the universal advantage of them all.

THUS it was, that when even Religion, tho' extremely mistaken, was the motive of those famous Expeditions to the *Holy Land*; yet jarring Interests and clashing Parties among the Christians ruin'd many a well prepar'd Army, and in the end baffled the whole Undertaking; leaving all their Conquests to fall into the Hands of the *Saracens*, even after one hundred and twenty Years Possession.

How often did the treachery of the *French* take the advantage of the *English* Kings being absent in the *Holy Land*, and under some frivolous pretence or other, fall upon his Territories at home.

How dear did *Richard* the First pay for his *Santa Terring* [*Anglice*] *Sauntering* in the *Holy Land*, when after an inglorious Expedition into *Palestine*, he was trepan'd in his return by one of his fellow Christians, and made a Prisoner, by the Arch-Duke of *Austria*, on a frivolous pretence; but really, and as the event shew'd to get Money out of him, let the cause of God and the Holy Sepulchre go which way it would?

SUCH, I say, is the power of Envy and Avarice that it is very hard to bring the Christian Nations to any concert of Measures for an universal Good; nay if this were not even now the Case, what shou'd hinder, or what did hinder Prince *Eugene* and the Imperial Armies, after the last great Victory, or the Dukes of *Lorraine* and *Bavaria*,

varia, after the first taking of *Belgrade*, when Prince *Lewis* of *Baden*, with part of the Army, had taken *Sophia*, and had not a long march to *Adrianople*? I say, what has hinder'd them driving the *Turks* out of *Constantinople*, and consequently out of *Europe*? Was it not the same envy and division of the Christian Powers, which was really the first occasion of letting the *Turks* into *Europe*? Did not the *French* at one time, and the *Spaniards* at the other time, give Umbrage of a Rupture to the Imperial Court, and so make it necessary to end the War, rather by a Peace with the Infidels, than by a Conquest?

I COULD carry it farther; How near did the differing Councils and jarring Interests of *Europe* go, to putting the victorious Hands of the late King of *France* in possession of an universal Monarchy over the Christian World; and what difficulty, and under how many disappointments and miscarriages, and at what expence of time as well as Money was a Confederacy at last form'd, strong enough to prevent it? But this is an Article, which however valuable, and which wou'd be delightful as well as useful to enter largely upon, is yet wide of my present design, and therefore I restrain my Pen, and tho' with reluctance leave it to a fitter Occasion.

BUT to return to the Case: It may be true that it wou'd be difficult to bring the jarring Interests of the *European* Princes to joyn in the clearing the Coasts of *Africa* from this bloody Race of Infidels which now possess it: But it does not follow, that it is at all the less needful to be done, or that it wou'd be at all the less advantageous for *Europe* if it were done; and granting me that, 'tis then the business of the Princes and Powers concern'd to consider of Measures for
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the doing it, and to answer for the omission if it is not done.

IT is none of my business to fall upon the Avarice and Envy of this or that particular Government or State, as the Cause; it is not for me to enquire, why the King of *Spain* was not seconded, thirded, encourag'd and assisted when he made an attempt for so glorious a Work, a few Years ago; and in which, had *France* alone but joyn'd with him, as they might well have done, he wou'd certainly have succeeded; for it is not the design of this Work to write Satyrs; but I may say, that all the trading part of *Europe* will have leisure to lament the loss of so glorious an Occasion, and many thousands of miserable Wretches who shall yet fall into the Hands of those Barbarians will have reason to curse the Disappointment.

I KNOW, that when the attempt was made many People look'd coolly on upon the Miscarriage, and not for want of Ignorance, seem'd pleas'd that the *Spaniards* did not succeed, pretended it wou'd encrease their Naval Power; and that they were strong enough already; that they were a Popish Crew, bloody and cruel as the *Moors*, or *Algerines* themselves; that they were Papists, and the most cruel of all Papists, and therefore we had no occasion to wish them good Speed, and the like.

BUT my Answers to all these Arguments are ready.

I. TRADE knows no Parties, no Politic, no religious Interests; Commerce is a certain Communication of Nations occasion'd by the necessities, and for the good of Mankind; the Enemies of Trade are Enemies to all Men; Pirates and High-SeaRobbers are wild Beasts that shou'd have no Law, and whom all Men should joyn to destroy

deftroy, without enquiring what or who they are : If a Bear or a Wolf fet upon a Traveller you do not enquire whether he be Papift or Proteftant in delivering him, 'tis enough, the one is a Man the other a Beaft.

II. LET the *Spaniards* be who or what they will the *Algerines* are worfe, the *Moors* of *Sallee* and *Morocco* are worfe ; the *Spaniards* do not make Prize of Merchants who peaceably purfue their Bufinefs, or of Ships honeftly purfuing their Voyages; when Papifts are at War, and take the Ships of their Enemies; they do not fell the Prifoners for Slaves, keep them on Shoar in Vaults and Caves, and at Sea chain them down to the Oar; as to Religion it is quite befide the Queftion; the Inquifition meddles with no Man for buying and felling, or for failing upon the Sea to this or that Port; there are no excommunicated Harbours or Bays that a Proteftant Ship may not Anchor in; no dedicated Harbours that a Heretic Veffel muft not take fhelter in; Trade is neither Popifh or Proteftant; we deal with Infidels in *Turkey*, and Pagans in *China*, without exception; the Pirates of *Barbary* are not Enemies of the *Europeans*, as Catholics or Heretics, but as Merchants, and for their Money, and as Men, for their Bodies to fell them as Cattle in the Markets.

III. LET then the *Moors* or *Algerines* be treated as they are Enemies, of Christians as Men, and Theives for their Goods, for the fake of Robbery and Plunder; and as fuch, the Christian Powers ought to Arm againft them as common Enemies, laying all national or religious Animofities afide; Why fhould not all the Nations

tions of *Europe* joyn in so necessary a Work? Whether they can or will be prevail'd with to do it; that is another Question.

CHARLES the Fifth, justly call'd the Great, saw into the reason, justice, and necessity of this; and as he was a most magnanimous as well as a politic and understanding Prince, he apply'd himself very seriously to the Work, and made two powerful Expeditions on purpose; the first succeeded gloriously, and he took the City of *Tunis*, with the Castle of *Goletto*, and in effect the whole Kingdom of *Tunis*; the second, against *Algier*, miscarried; by reason of a terrible Tempest which scatter'd and destroy'd great part of his Fleet, and he return'd with loss; but this was unavoidable, and the like might easily be prevented. But even this shews, that great and generous Princes have formerly thought this Work worthy their undertaking; that it is not done, if it is from Heaven, is a Judgment upon the Christian World for the Omission; and if it is not attempted they will always, like the *Canaanites* in the Land, be left there for Goads in our Sides; only let us remember the *Israelites* were always blam'd for not destroying the said *Canaanites*, and for leaving one of them alive; and this is a Summons to me to speak to another Objection, tho' not mention'd before; namely, What right have we or any of the Christian Nations of *Europe* to invade and dispossess these People, who however they came by their Possessions, have enjoy'd them by so long a prescription, as namely, about or above a thousand Years, that if we look back so many Ages into any of the Christian Nations we speak of, we may find our right to the Country we live in, as ill founded perhaps as these; that it is not sufficient to say they are *Mahometans*,
and

and not Christians; for then we have a right to make War upon and destroy all the Heathen Nations of the World, which I do not take to be just?

To this I answer, That there is something specious in the Objection, yet there is as clear and undeniable an Argument to be used for the justice of the attempt as can be desir'd in the World; and it is form'd in a just distinction between the People as they are Men, and the People as they practise and behave. We do not execute a Murderer because he was a Man, and had ability or courage to commit the Murder, but as he was a Criminal, a Manslayer, and had shed innocent Blood.

So let the *Moors* and *Turks* of *Salée*, *Algier*, and *Tunis*, and *Tripoli*, apply themselves in a peaceable manner by honest Labour, or Commerce, to cultivate the Earth, and live on the honest Fruits of their Labour, I had nothing to say; a-God's-Name let them enjoy and peaceably dwell in the Land, and we might trade with them, as well as we do with their fellow Infidels at *Constantinople*, *Smyrna*, *Aleppo*, and other places; for this Quarrel does not lye against them as Men, nor as *Turks* and *Mahometans*.

BUT the Quarrel at them is, as they are Thieves, Robbers, and Murderers, and as such they both may and ought to be suppress'd, and 'tis the reproach of Christendom that they are not.

To make this evident, it wou'd be sufficient to advance, that the Christian Nations shou'd in case of such a War, only drive them off fifteen or twenty Miles from the Sea-coasts; there is Country enough for them all, to spread themselves as far as they please; but I think they have done enough to *Europe* for so many hundred Years together to
deserve

deserve to be banish'd from the Sea for ever ; let them then but be extinguish'd as Pirates, the rest will come of course, and they may be as Potent in Numbers as they will or can, the Trade wou'd soon revive ; nay those very Men who are now drones in the great *Hive*, and devour the labour of the industrious World, wou'd then become laborious and diligent as other Nations are, and be a Blessing not a Judgment to the World.

THIS I think takes away all pretence of objection against the justice and lawfulness of attacking those People ; for let them live honestly and industriously by Labour or Commerce, or any how, so as not to oppress or wrong the rest of the World, and we have nothing to say.

BUT as they will never do that, as long as they have Ships, and Guns, and Men to go a robbing ; I think it is but just they shou'd be at least remov'd from the Sea-shore, and be suffer'd no more to set a Sail or row with an Oar upon the Sea : Nor can this be unjust on this account, 1. They have done sufficient to forfeit the Seas, that is, the privilege of sailing upon the Water, as long as they have a Name on the Earth, or at least as Nations. And *Secondly*, They are able to give no other sufficient security for their Behaviour than that of entirely quitting the Coast, giving up their Ships, and being allow'd to have no more Ships or Boats to make use of.

How easy wou'd this be, if the *European* Powers were but once resolv'd to unite their Forces for the attempt ; nor wou'd it be an Expedition that wou'd call for all their Forces, no nor for the twentieth part of their Forces, if they thought fit to make an Experiment ; and how gloriously wou'd it reward their Labour ?

LET us but consider the Blessing and Satisfaction which it wou'd be in Trade to have no Enemy to fear ; to have Ships sail single, and as it were unarm'd, into all parts of the *Mediterranean* ; to have all the Ports of *Africa* free and friendly ; no danger or apprehension of danger any where : Whereas now,

NOT a Sailor goes to Sea in a Merchant Ship, but he feels some secret Tremor, that it may one time or other be his lot to be taken by the *Turks* ; it is impossible for a Seaman to sail by the Coast of *Algier*, or *Tunis*, without having a kind of horreur at the place, and a little panick fear upon his Spirits about it, that sometime or other it may be his lot to be carry'd in there and sold for a Slave.

NOT an Inhabitant on the Coast of *Spain* or *Italy*, no not from *Gibraltar* to the City of *Venice*, the fortify'd places excepted, but they are in constant apprehensions of being surpriz'd in their Beds, Men, Women, and Children, and hurry'd naked, and spoil'd of all they have on board some Pirate Sloop or Bark, that has made a descent upon the Coast on purpose to carry off such a booty ; and this has been practis'd all along upon that Coast.

AGAIN, from *Apes-hill*, at the mouth of the Straights, just below *Centa*, to the very Gates of *Alexandria* : You have not now a friendly Port, not a Town, a few the *Spaniards* have possessed only excepted, where you shall not be in danger of a surprize on what condition soever, or in what distress soever you are driven in.

ENQUIRE into Trade itself, the awe and dread of this hellish Crew puts the Merchants to a daily expence in their Business; every Voyage they lay in double store of Ammunition, and double Man every Ship; Victuals and Wages, encrease the charge of the Voyage, the Ensurers advance the Premium upon every Cargo, because of the possibility only of this danger; great Guns and small Arms are added in proportion; and after all, how much Blood is shed in gallantly defending themselves when attackt, even in those Ships which are not taken.

How much needless expence has this been to the Trade of *Europe* in so many hundred Years as this mischief has reign'd? Nay, how much more than it wou'd have cost the Nations concern'd to have sent a hundred thousand Men at once to have reduc'd those Desperadoes, and have blow'd them all out of the World?

BESIDES this vast expence which the Merchants have suffer'd; and the public expences in the several fitting out Squadrons of Men of War to fight them, sending others to convoy their Merchants Ships, and at last sending Envoys to treat of Peace, and make Terms with these despicable Rogues, for such they are, and in a moment upon every Caprice the Peace is broken, and our Ships surpriz'd again.

How have the States General been oblig'd now four Years to send Squadrons of Ships of War every Year to the *Mediterranean* to fight the *Algerines*? And at the same time, What a vast value have they lost in Ships and Goods taken by those Rovers? And how many Lives lost? How many poor Men carry'd into miserable Captivity? And so successful have they been, that they despise all the offers of Peace the *Dutch* can make; nay, the intercession

tercession of the Grand Seignior himself for the *Dutch* is refused, unless such insolent Conditions should be accepted by the States, as the very King of *Sardinia* wou'd despise : nay, the Republic of *Lucca* wou'd scorn them; amounting, in short, to little less than making the States General of the United *Netherlands* tributary to, and Subjects of the *Turks* at *Algier* ?

How much cheaper, as well as more honourable, and indeed reasonable, wou'd it be to have all the Merchandizing part of the Christian World join together, and by sending a formidable Fleet and Army, fall upon them at once; and in one hearty attempt put an end to their Depredation, and clear the Seas of them for ever.

THE N the Trade of *Africa* wou'd be reviv'd; the Towns upon the Sea-coasts wou'd be restor'd. As they wou'd be under a Christian Government, so they wou'd be inhabited by Christians; and in a few Ages the Numbers wou'd encrease, and the Country perhaps be as well inhabited as *Europe* is now, and a Trade establish'd with them in proportion; for Numbers of People encrease Trade, Manufactures wou'd be call'd for there as well as in other Countries; and as they have a plentiful Product for the supply of Returns, the advantage must be mutual.

BUT all this you will say does not reach the Case; the Objection is laid from another Difficulty; namely, Whether it wou'd be possible that the Nations cou'd agree about the division of their Conquests when they were made? that they wou'd fall together by the Ears about Shares, and by envyings and jarring Interests ruin the Undertaking, and leave the *Turks* Victorious, and more Insolent than they were before.

IF this were really true it wou'd be very sad, and the miscarriage wou'd lye heavy; but I do

not see that this must necessarily follow; for if by a Treaty enter'd upon before, it shou'd be adjusted what particular part each Nation shou'd attack, and so go on in separate Bodies; tho' all shou'd fall on together, it might be easy to allot every Nation what part they shou'd possess, by appointing each Nation to conquer for themselves.

OR if it was found reasonable to join the Forces of two or more Nations together, yet they might enter into mutual Guarantee with one another to set a-part the design'd Countries to the use of those to whom they were so allotted by agreement; and to give them up peaceably, all the Confederates joining to enforce the execution of such a Treaty, when the War was over; or to declare War against the particular Nation or Power that shou'd refuse it.

CURIOSITY now might lead the Reader to desire me to enter into particulars, and to lay down a Scheme how I wou'd have them share this *Bear-skin*; but I think, tho' 'tis easy in itself, it wou'd be too assuming and arrogant in an Undertaking of this kind; then as here is a vastly extended Coast, such as wou'd be sufficient for all Pretenders to it; I may turn it all into a Supposition, and let the Reader digest it for himself.

SUPPOSE then, That each Nation in the *Mediterranean* had allotted them all and as much of the Coast of *Africa* as lay right against themselves; the *Spaniards*, what is over against *Spain*, which by the way wou'd be the largest part; the *French*, what is over-against *France*; the King of *Sardinia*, the part opposite to *Sicily*, the *Malteses* joining with him, and the *Sicilians*, the *Venetians*, and *Neapolitans*, all the East part from *Tripoli* to *Alexandria*, with all they could separately seize upon and support; then

I give the *English* the South side of the Straights Mouth, from *Centa*, inclusive, to *Tangier*, and about to the Southward, as far as *Santa Cruz*; the *Dutch* in Conjunction with the *English* to enter into the Kingdom or Empire of *Fez* and *Morocco*, and driving all before them, these Infidels wou'd soon be push'd away, and our two Nations settled infallibly and equally upon the Spot.

If any will question here, whether they will be able to conquer the Black Kings and reduce them to Reason, or not to do it, I must answer them distinctly, that it is as easy to do it, as for me to write it; but these being Speculations, I sum them all up thus, *Africa* is so large in its extent, and the Country on the Coast every where so good that there is enough to satisfy every Pretender, and let every one keep what they conquer: as for *England* give her but a free Trade with them all, she seeks no Possessions; her Factories and Settlements on the Gold Coast, in *Ginnea*, excepted, of which hereafter.

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HISTORY

DISCOVERIES

MEMOIRS

OF THE

AMERICAN

REPUBLIC

IN THE

WEST

INDIAN

TRADING

COMPANY

OF THE



CHAP. XIII.

Of the stop of Trade at the destruction of Carthage. How Silk Worms came first to be known in Italy; and how the Woollen Manufactures were first Invented and set on Foot in the World.

WE have now brought Trade to a full stop in the World; Commerce, like a Boat a Drift, was lost, and left as it were rolling upon the Water without a Rudder, an Oar, or a Sail; all its parts were dislocated, and scarce the name of Commerce was left in the World. The Merchants which were left, were destitute of Correspondencies; the buying part of the World destitute of Manufactures; Natures produce, which is the principle of all Manufacturing, was destitute of a Market; Goods made could not be sold, Goods wanted could not be found, Necessity was brought to put Invention upon the Rack, in order to form (as the Doctors call it, some new *Materia Medica*) a new System of Trade, and new substance of Materials, to set the World to work upon.

THE Original of all Manufacture, and (in those times, which I have been treating of) the only Materials then known, for manufacturing, were SILK and HAIR, COTTON and FLAX. This is plain from all kinds of antient Writers, and from the product of those Countries, at this time.

I. **SILK.** The rich Man was cloathed in Purple, it seems he coveted to be seen in gorgeous Apparel, which could be no other than such as the *Babylonish Garment* was, that *Acban* stole, (*viz.*) Silk embroider'd with Gold and Silver, and various colours of other Silk.

II. **FLAX.** Fine Linen of *Egypt*, was then very well known, and the Priests Vestments were either of such fine Linen (as the Ephod in particular) or of Silk.

III. **COTTON.** For I make no doubt, as the Women were, and wou'd be cloathed richly too as well as the Men; so, they not being able in those warm Countries, to wear heavy Clothing, contented themselves as with the rich Atleßes, and flower'd Silks; so with the light painted Chints, and fine *Maslapatans*, &c. of *Bengal*, and *Golconda*, and all the Callicoes of the *East-Indies*, that part between the *Ganges*, and the *Indus*; and which were brought into *Europe*, either by the *Red Sea*, to *Sues*, and *Alexandria*, or by the Caravans to *Aleppo* and *Smyrna*.

BUT *Corinth* being ruin'd on one hand, and *Carthage* the Year after on the other; by which two Cities the whole Wealth of the *Indies* circulated, there was a full stop of that Trade; nor did it ever see itself fully restor'd. For,

I. **EUROPE**, (by which I mean the Inhabitants of *Europe*) applying themselves with great vigor to Trade, it was not many Years before (especially in *Italy*) they found the method of getting the Silk unwrought from the Coast of the *Caspian Sea*, and learned to manufacture it in their

their own Countries; and within a few Ages more, they found means to bring over the very Species, (*viz.*) the Worms, which produced those Silks, and the Mulberry Trees which fed them, and which together was the very Blood of the Commerce, and so made it appear they cou'd naturalize both to these *European* Climates; and that in time they wou'd have no more need to go to *India* and *Persia* for Clothing their People, but would be able in a few Years to make the Trade subsist at home, and cloath themselves by the product of their own Climate, and the labour of their own Hands.

THE effect of this was, That *Italy* (that is) the South part of *Italy* and *Sicily*, supplying Silk, and the adjacent Country of *Lombardy*, namely, the Duchies of *Milan* and *Mantua*, furnishing innumerable Hands to manufacture those Silks, the Trade between *Europe* and *Asia*, (that is, *Persia*, *Georgia*, and *India*) died away; as far as related to wrought Silks, and Manufactures of Cotton and Hair, &c. and in a few Years more was wholly confin'd to the Trade of Spices, Gums, and Drugs, which continued to be brought to *Sues*, in the *Red Sea*, and from thence to *Alexandria*; which Trade the *Venetians* and the *Genoese* shar'd between them, as shall be seen in its place; and as for the Silks, they were so far from wanting them, that the *Italians*, for many Ages, out-did the *Persians* and *Indians*, and abundantly supplied themselves, and all *Europe*, with wrought Silks, without so much as thinking any more of *Persia*, or *India*.

THUS stood the Commerce of *Europe*, for some Ages, after the first decay of the *East India* Trade, by the destruction of *Corinth* and *Carthage*. The *Romans* troubled themselves not, as a State, and in their politic Capacity, with matters of

Commerce; nor do I find, except what related to supplying the City of *Rome*, and the Country adjacent with Corn, any one Act of the Senate, or Edict of any Emperor, for the directing, regulating, or encouraging Commerce, or Manufactures, under the whole *Roman* Government, from the time of the destruction of *Carthage*, to the time of *Justinian the Great*, that is to say, for above 900 Years.

TRADE was left, as I have said, to its own Fate; Merchandizing went forward, as the Merchants of those times thought fit to act, every one in the narrow Circle, or Sphere of his own views, traded this way or that way, as they pleas'd.

I KNOW they tell us of Fleets of Ships, in the *Romans* time, which went to the *Indies*, and return'd again into the *Red Sea*; that is to say, to the Gulph of *Sues*, upon the Northern Shore, or point of that Sea; but we read little of what they brought. 'Tis certain, that after *Augustus's* time, when as I said, the Citizens of *Naples* fetching only the Silk from *Persia*, began to manufacture their own Goods; I say, from that time the *East India* Ships brought home little but the Spices and Callicoes of *India*, leaving the wrought Silks of *Persia* behind, as what the *Romans* were well enough furnish'd with at home.

THUS continued the Affairs of Trade during the time of the *Roman* Grandeur; for then, *Rome* being Mistress of the World, *Italy* was the center of its Commerce; and having above six Millions and a half of People in it, the supplying them with but every one a yard of Linen, and every one a yard of Silk, was enough to have set all the Weavers in *Egypt* and *Persia* at Work.

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BUT *Italy* is a warm Climate, and as it stands just where it did, it is to be suppos'd the Climate was as hot then as it is now; and this occasion'd the People, both Men and Women, to go as thin cloth'd as they could; nay it was complain'd in *Augustus's* Reign, that the Ladies Clothing, leaving the Neck and Breasts, down to the Stomach, quite bare; and the Legs, above the Knee, in part so too, the loose Robe being button'd up upon the Thigh; the rest of the Body clothed with thin Lawns and Crape (next to a fine Muslin) lay so close to the Body that the parts were all distinguish'd thro' the covering, and it was but a civiler kind of going naked, when all the Shapes of the Body were delineated, even thro' the shade of the Habit. This loose way of Dressing the *Roman Virtuosi* exclaim'd at very often, as done to excite Lewdness; and *Juvenal* often Expostulates with the *Roman Ladies* about it: But that is foreign to my purpose, except thus far, namely; It proves that the Trade from *India* of fine Muslins, and fine Callicoes, and *Chints*, fully supply'd the demand of *Italy* for a long time with Clothing, especially for the Ladies; as to the Robes of the Men, the *Toga*, or loose Mantle, which the Men wore; that was supplied with a differing and remote Manufacture; namely, to those who could support the expence of it, *Persian* and *Indian* wrought Silks made the Vest; and the Robe was fine Damask, and others follow'd their example, where they could come up to the wear; for the rest several kinds of Cotton Stuffs, and Camblets made of Goats and Camels Hair, such as they made use of for many Ages after, and such as they make use of in those Countries to this Day; some of which may be those we call *Turkey Burdets*, and are still call'd by the Name of *Turkey Stuffs* of what kind soever.

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THE Poor had their different Clothing, as the Poor have in all Nations; and by degrees, the Silk being too dear in the Materials as well as Workmanship, and Cotton being fetch'd too far to come to a reasonable price; I say, by degrees they began to make use of the Wooll from the Back of the Sheep, to make coarse Garments for the Poor, and to give them relief against the Inclemencies of the Seasons, as well Heat as Cold; and even in this they found themselves out-done by the *Vandals*, the *Goths*, and the other barbarous Nations; which in the several declining Years of their Empire made Excursions from their frozen Mountains into the softer and warmer Climates of *Italy*.

WHEN those wild People, especially the *Heruli*, and the *Sarmatians*, who came out of *Poland* and *Muscovy*, the Upper *Hungary* and *Austria*; and more especially the *Vandals*, who came from the frozen Shores of the *Baltick*, and the Countries about *Prussia* and *Pomerania*; I say, when these People came down, they found their Princes and Generals dress'd up in costly Furs, the Sables and Ermines, the Beavers and Foxes Skins of the Northern Climates; their Horses were cover'd, (and which serv'd them for Saddles and Housings) with the Skins of Bears and Ounxes, Buffaloes, Rain Deer, Stags, and the like.

THE Soldiers had their clothing of Skins also, but of meaner sorts, such as the Hare, the Coney, the Badger, the Otter, the Sheep, and the Lamb; of which the Fur, or Wooll, being inward, as well as outward, they were exceeding warm, and not to be endur'd when they march'd so far as *Italy*, where they soon learnt to cloath themselves with the Spoils of the Country, and often left their richest Furs behind them, especially if being beaten, as they were frequently by the
Romans,

Romans, they were oblig'd to leave their Bones behind them too, sometimes two or three hundred thousand at a time.

PROCESS of time however, mended things with those Northern People; and whereas at first they came down cloath'd with the Skins of wild and ravenous Beasts, themselves more savage, wild, and ravenous than the Beasts whose badges they wore; so in a few Ages the *Romans* perceived the Wooll of the Sheep, instead of being worn on the Backs of the poor Soldiers rough upon the Skin, and the Skin perhaps with no other dressing than being dryed in the Sun; I say, they perceiv'd the Wooll taken off from the Skin woven and manufactur'd into a different species of Garments, call'd Cloth of Wooll, or Woollen; and tho' this at first might be about as good as our Rugs, Duffels, and Blankets, or perhaps not so good; they fitted the purposes for which they were design'd, and serv'd not only to accommodate the People, but even to make them proud of the Habit: Thus we find in some of the descriptions of the antient Northern *Gauls* and *Britains*, that their Habit was a Rug, with Tags or Thrumbs of Wooll hanging down on the outside, the same as we frequently find some Gentlemen affect to wear now, not for necessity, but in affectation and mimicry to look a little savage and barbarous; as if any thing that look'd wild and mountainous was a Beauty to them, and could pass for Ornaments, because they thought fit to make use of them; But the humours of a time, and of a few, is not worth a Digression; 'tis enough to tell us what was the gross beginning of that we now call the Woollen Manufacture. In all those antient Ages of the World, *Egypt* carry'd on a mighty Trade in the Linen Manufacture, and *fine Linen of Egypt* was the greatest rarity
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of the World of the kind ; and this, with the vast plenty of Corn that always grew there, made *Egypt* Rich ; for *Egypt* ever since the time of *Joseph* and his Brethren, was the Granary of the World for Corn : It is true Corn is a Product, not a Manufacture, a Supply on Occasion to any Country, not a Commerce, but Linen was their Wealth, their main and chief Employ, a national Business, the Manufacture of the Country, and on which she chiefly depended. This we may reasonably conjecture was the Reason of the place being so infinitely and incredibly populous ; inso-much that they tell us when *Nebuchadnezzar*, after his disappointment in the taking of *Tyre*, invaded and took *Egypt*, there were then twenty thousand Towns in it ; some of which were great and populous Cities, and especially one, suppos'd to be the *Memphis* of the Antients, as immensely great as they say *Grand Cairo* is now, and had six or seven Millions of People in it, with the vast Wealth, of which, when the *Babylonian* King plunder'd it, besides enriching his whole Army, and as some say, his whole Empire, I say, with that overplus Wealth he built or cast that monstrous Idol which he set up in the Plains of *Dura*, in the Province of *Babylon*, and which was all of Massy Gold ; the dimensions of which are described, *Dan. iii. 1. The height sixty Cubits, and breadth six Cubits*, or, to allow a Foot and half to each Cubit, it was ninety Foot high, and nine Foot thick, being (to bring it down to vulgar Apprehension) near half as high as our Monument ; all, I say, of Gold : What the shape of it was, we know the Scripture is silent in, but Authors generally agree, that like the *Collossus* at *Rhodes*, it was in the figure of a Man.

THIS infinite Number of People in *Egypt*, and the exceeding Wealth of that Country, is not
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at all improbable, were drawn together by Commerce; and the whole Commerce of the Country in all those early Days was in fine Linen, Purple, and Blue, Embroidery, and such nice Works of the Needle, *Ezekiel xxvii. 7. Fine Linen, with embroidered Work from Egypt*; and again verse 16. *Purple, and embroidered Work, and fine Linen from Syria*; and we all know that Syria is the next Country adjoining to *Egypt*, and was then under *Pharaoh's* Dominion; and again verse 27. *Blue Cloths, and embroidered Works, and Chests of rich Apparel, from Sheba and Ashur*; these were Countries in *Arabia*, just opposite to *Egypt*, on the *Red Sea*.

THIS shews us what a place of Trade *Egypt* was, for Manufactures; and that by these Manufactures they became so prodigiously Populous; for Manufactures bring Trade, and Trade disperses, that is, consumes the Manufacture, and both bring numbers of People together; nor does it appear that any Kingdom in the World was ever extremely Populous but by the efficiency of Trade, except *Italy* and *India*; and for those particular exceptions we may reasonably make Allowances, since their Governments are so publickly known, one happening by the immediate disposition of Heaven, and the other being occasion'd by its being the center of the great Empire of the World.

ALL the other great and populous Countries in the World, have been made so by Commerce, and by Manufactures, and by these only; as *Prussia* once the most populous spot of Ground in the World, and still continuing extremely full of large Cities, and Towns, and People; it was then the seat of the *Teutonic Knights*, and *Hans-Men*, the great Patrons of Trade; the only, and perhaps first Merchants of *Europe*, of whom I shall speak in their turn: They were first call'd *Esterlings*, and
Y then

then *Hans Towns*, and some of them retain their grandeur in Trade to this Day, as *Dantzick*, *Elbing*, *Koningsberg*, and several others.

FLANDERS, that is to say, the seventeen Provinces, which are now the most populous Country in *Europe*, if not in the World, and of which the United States are but a part; how evidently did their Wealth and their exceeding multitude of People, derive from the Woollen Manufacture which thriv'd here; and which Manufacture was the effect of *England's* being so near, from whence they had their Wooll; for *England* from the most early Ages was the Store-house of the World for the best and finest Wooll, and which indeed was to be had no where else; which same Manufacture has since that (being restrain'd within ourselves) made *England* at this time the most wealthy and trading Country in the whole World; in proportion Populous, and growing in Numbers and Wealth every Day, so visibly, and so fast, as may in time make it, if it is not already, the most populous Nation in the World.

How long this Linen Manufacture reign'd in *Egypt*, History is silent in, but we may venture to say, or at least to suppose, that when the *Egyptians* submitted to *Omar* the second Caliph of the *Arabian Race*, Anno. 640. the *Arabians*, and by their example all the *Mahometan* Princes after him, living like *Arabians*, that is to say upon Rapin, Trade, which never thrives under Tyranny, forsook the Land of *Egypt*; the Merchants, plundered and robb'd by the *Saracens*, wou'd venture no more to trade to a Country where they cou'd not be protected from being ruin'd; and so the fine Linen of *Egypt*, which was the most eminent Manufacture in that part of the World, sunk so effectually out of all that Country; that in a Word, they do not (now) make Linen enough
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for their own use, but have it brought from *Hamburg*, from *Amsterdam*, from *Marseilles*, and other *European* Parts, where that Manufacture is since erected to the infinite profit of those Countries, and employment and support of the Poor.

HAVING thus as it were led things on to the downfall of the *Roman* Empire, Trade we find springing up in different parts of the World, as the several Governments which set themselves up after obtaining liberty from the *Roman* Yoke qualify'd themselves to give the trading World a due encouragement and protection; and the two first of these were the State of *Venice*, and the *Teutonic* Order; of both which, and the manner of their introducing Commerce into the Northern parts of *Europe*, I shall speak in their order.



C H A P. XIV.

Of the several new Discoveries and Improvements which were made in the World under the Roman Government, after the overthrow of the Carthaginians, but especially after the declining state of the Roman Empire.

I MUST now go back a little again to mention the other parts of my Work, and according to my Title, to speak of the Article ranged under New Discovery.

THAT Learning flourish'd under the *Roman* Government is not to be deny'd; that the *Romans* civiliz'd the World, and brought the barbarous Nations not only to submit to Government but

the regularity of that Government, and the equity of their Laws made the People easy, their Persons and Properties safe; and in consequence of that Safety and Liberty the People were encourag'd to Arts, Industry, and Learning; in a Word, every thing receiv'd Encouragement under the *Roman Administration but Trade.*

It is true, they did not particularly oppress Trade, or discourage the People from it, except, that indeed sometimes their Taxes were heavy, and Impositions of Conquerors always discourage the Merchant; for the Sword too often reaps the Harvest of the industrious Merchant; but even in that part, the *Roman Government* was as moderate as their Circumstances wou'd admit.

BUT here lay the difference; It is not enough to the planting and establishing Commerce, that a Government shou'd not openly discourage it; but Trade and new Discovery must be the nursery and darling of the Government they live under; the Merchant must receive the countenance and assistance of the Government he lives under, or Trade never rises with advantage.

COMMERCE receiv'd a mortal blow in the destruction of *Carthage*; the whole World felt the shock; as their Discoveries abroad lately begun, sunk and were destroy'd in the general disaster, for want of Supplies; so Invention, useful Undertakings, Arts, Science, all which were flourishing and encreasing at home under the *Carthaginian Government*, were likewise overwhelm'd in it, and all the Manufactures sunk with it, as no doubt many were on foot, among a People whose Genius addicted them to encourage Manufacture and employ their People: All were overwhelm'd in the general Ruin; the Mines of Copper, and Iron, and even of Silver, in many Countries were

were left unwrought, and the Iron in particular in *Africa* was never thorowly recover'd to this Day; nor has the manufacturing the Iron, which flourish'd particularly in *Carthage*, for the making Armour, Weapons, and all the needful Utensils of War, in which the *Carthaginians* excel'd all the World, ever been restor'd to *Africa* to this Day.

IN a Word, all the trading World felt the blow; and we find nothing considerable done in Manufacture, or Inventions, relating to Trade, after the fall of *Carthage*, for many Ages: Let us see however what progress was made in other things; and how the World came gradually to the knowledge of one another.

DISCOVERIES for Trade were not made indeed, but Discoveries were made for all that, be the Reasons of them what they wou'd; for example, *Carthage* was destroy'd in the Year of the World 3804, 144 Years before our Saviour was Born. *Julius Cæsar's* progress into the North of *Europe* was not till eighty seven Years afterwards, being *Anno Mundi* 3891, fifty seven Years before Christ; and tho' it was not a discovery for Commerce, or a planting for Improvement, but a mere possessing by Armies for extending Conquests and encrease of Power; yet this as well as other Conquests of *Julius Cæsar* made much about the same time, brought on the necessary discoveries of Commerce which have follow'd.

THE *Belgæ*, by which is to be understood all the Lower *Germany*, were a potent People inhabiting the inaccessible Countries of *Westphalia*, *East-Friesland*, and as much as was then habitable of the *Netherlands*, or *Low Countries*; for the most part of those Provinces were then rendered not habitable, by the inundations of the many great Rivers, which empty themselves into the Ocean

Ocean at that place; such as the *Wefer*, the *Embs*, the *Rhine*, the *Maes*, and the *Scheld*, with many other lesser Rivers; which altogether pouring their Waters into this one part, as into a Common-shore, as either by Freshes and Floods from the Country, or North-Westerly Winds, bringing high Tides from the Sea, the Waters were rais'd above their usual height, all the lower part now call'd *Netherland*, or the *Low-Countries*, were laid under Water like a Sea, and the higher Grounds surrounded, which therefore I call Inaccessible.

THOSE People began to be better acquainted with the *Roman* Government after they found that *Great Britain* had submitted, and how well they brook'd the Conquerors, and in a few Ages afterwards, these *Belgia* became a Province of the *Roman* Empire; and as they liv'd among Waters became eminent for their Skill in navigating the most boisterous Seas.

BUT still those Discoveries added little to the World, in respect to Commerce, till, after some Ages, the *Belgia* began the great Improvement of all, namely, that of the Woollen Manufacture; which however was not, I say, for some Ages. But the first branch of Improvement, which these *Low-Countrymen* employ'd themselves in, was recovering the Land from the inundations of the Sea; and they were assisted in, if not first prompted to it, by the *Romans*; and particularly we find that *Drusus Nero* the *Roman* General has the honour of cutting the great Chanel or Canal, which joins the *Rhine*, and the *Tffel*, and so upon any occasion of a Land Flood casts off a great part of the Water of the *Rhine* into the *Zuyder*, or the Southern Sea; by which means all the Country below *Arnheim* as far as *Utrecht* and *Leyden* were eas'd of that vast weight of Water which at some Seasons came down the *Rhine*, and like the *Nile*, wou'd

cover

cover the whole Country, no Dykes or Banks being able to restrain them.

THIS Chancel being thus successfully cut, and the effect of it appearing so infinitely advantageous to the Country, the example set the several Princes of the *Belgia* in their respective Districts or Dominions, upon that noble work, of recovering those rich Lands from the constant inundations of Water which annually overflow'd them, and render'd them useless to Mankind, and to shut them in with Banks and Walls built up with immense Labour, strengthen'd with vast quantities of Stones and solid Materials fetch'd a great way, and at a prodigious expence, buttressed up with Piles and ranges of Piles, driven in sometimes three upon one another; and then making those Lands compleatly safe, and laying them dry, tho', as is observ'd by Travellers, the whole Surface of the Country lyes several Yards lower than the ordinary Surface of the Water; and this was done with such Art, and follow'd with such Application, tho' very gradually, and some Ages of Years in finishing, that now we see two large Governments, Kingdoms we might call them; and two most powerful and prodigiously populous Nations, namely, the *Dutch* and the *Flemings* living securely, and large Cities and Towns flourishing, which were for 4000 Years before delug'd with Water, useless and impracticable.

THIS I hope I may be allow'd to call an *Improvement*; and that this Undertaking was so ancient, and the finishing it to some degree in those early times recorded, will appear by the many foundations of royal Cities laid there since the recovery of those Lands; such as that of *Rotterdam*, *Middleburgh*, *Groninghen*, *Ghertrugdenburgh*, and innumerable others in *Holland*; also *Bruges*, *Ghent*, *Sluyce*, *Ostend*, *Newport*, and even *Antwerp*

werp itself, and many more on that side of *Flanders*.

THE several Improvements of the like nature in other Countries, made after the example of the *Belgia*, are to be mention'd in their order; as particularly the Triangle or *Delta* of *Egypt*, at the Mouth of the *Nile*, the Marish of *Martigues* in the *Gallia Narbonensis* at the Mouth of the *Rhodon*; the low Land of *Prussia* drain'd by *Teutones*, thence call'd the *Teutonic Order*, at the Mouth of the great Rivers *Vistula*, and of the *Pergle*, and the *Neimen* in *Poland*, the same in the Fens of *Deitmarsh*, and the Lands upon the *Eyderstrom*, on the North-Bank of the *Elb*, in *Holstein* and *Sleswick*; with innumerable others sum'd up in the general Article of the Improvement of Land; which, as it is said the *Romans* first gave the example of; and to sum up all, the *Veneti* found the benefit of the like at the decay of the *Roman State*, by which alone they preserv'd themselves, retreating among the Islands of the *Adriatick Gulph*, and the drown'd Lands between the Mouths of the *Po*, and near the Influx of the *Adige*, and several other Rivers; where draining and securing those Lands from the inundation of the Rivers, they at the same time fortify'd themselves against the attacks of the *Heruli*; and afterwards of all the barbarous Nations which over-run the *Roman Empire*.

THIS is but a brief History of a long series of Time; but as a History of Improvement is a part of this Work; and this is the beginning of all Improvement in the World, in the sense of the Question; so I think it is the most considerable thing of its kind, and as it is what we see the effect of every Day before our Eyes, we cannot think it so remote as other Instances might.

HAD not this piece of Improvement been made we had known no States of the *United Provinces*

vinces; no *Austrian Netherlands*; nor had we heard of all the famous things done, and Men concern'd in the two most fatal Wars of the World, and which lasted (but with small intervals) above forty Years each; I mean the War between the *Dutch* and the King of *Spain*, when the former began to be a free State; and the late War between *France* and the Confederates, in which Liberty was effectually restor'd to all the oppress'd Nations, and *Europe* may be said to become one free People.

IT is most certain, that the Progress of *Julius Caesar* into *Britain*, and into the Northern Provinces of the *Gauls* and *Germans*, was to the *Romans* as the planting *New-England* and *Virginia* was to the *English*, I mean a *New Discovery*; with this difference only, that they planted for Conquest, we planted for Commerce; they planted to extend their Dominion, we to extend our Trade; and as the last is the best Foundation, so it is the surest Possession, and will certainly continue longest; experience tells us so, witness the long continuance of the Colonies and Nations here in *Britain*, and in the *Low-Countries*, notwithstanding the fall of their Lords and Discoverers, the *Romans*: Which have continued their Establishments in Trade, tho' the Conquerors (the *Romans*) expir'd as a Nation; and witness the *British* Colonies in *America*, which continued their trading Circumstances, when the Government of *Great Britain* receiv'd a shock, the Monarchy was overwhelm'd, and in a manner destroy'd in our own Civil Convulsions.

AND here I might make a useful Digression concerning the durable nature of Commerce; how it establishes Nations, but never destroys them; how it renders them much more immortal than Conquest and Victory, and gives real, not

imaginary Triumphs to a People; for example; The Trade in Copper which the *Carthaginians* drove with the City of *Corinth*, of which so much has been said; and of which the famous *Corinthian* Brass was made (not of the molten Gold and Copper which Fable tells us was found upon Images, among the Statues and Temples of their Gods, and which the Fire melted down in the Conflagration of the City) I say that Copper continues still a noble Product of the Country of *Africa*, notwithstanding all the Calamities, Dissolution of Governments, burning Cities, and even rooting out of People, which has happen'd in *Africa*: The *Carthaginians* went off the Stage first, the *Romans* after; the *Vandals*, *Goths*, *Saracens*, and *Moors*, have all taken their turn upon the Stage of the *African* Governments; but the Copper Mines are the same to this Day, and are like to be the same to the last Conflagration; but this is a Digression.

THE attempt of the *Romans* upon the *Britains* and the *Belgi*, as I have observ'd, were really Discoveries and Improvements; I might indeed say they were Plantations and Settlements; but those are modern Words, not in use in the *Roman* Days: Colonies indeed they were call'd, and were planted and settled as such, and such *Britain* was in general, and the several Stations of their Legionary Troops were so in particular, and altogether were more so, as their Inclinations to recover their Liberty were stronger or weaker.

BUT even *Britain*, or the *Belgi*, knew little of Trade till afterwards; for the *Romans* themselves enter'd into no measures about Trade; all that occur'd to them in planting such Colonies was to secure a Communication with them, to, and from other *Roman Colonies*, or to, and from Nations in subjection to, or confederacy with the *Romans*,
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that so the Colony might receive supplies of Provisions, and support of Troops, as occasion requir'd; and tho' this did even of itself create Commerce, and in the consequence of things did in time make Trade, by the industry and application of the People, and by their being under the *Roman* Protection; yet the *Romans* themselves never had it in their view, at least we see no room to think they had; nor do the Nations owe their Introductions to Trade to the *Romans*, any otherwise than as the *Romans* gave them Peace and Protection in the pursuit of the prospects of Improvement which the nature of things offer'd them, by that Peace and Protection the industry of the People receiv'd encouragement.

ADD to this, tho' it be but an Observation by the by, That Religion spreading itself through the World soon after these Conquests of the *Romans*, and very much by the help of those Conquests; I say Religion spreading among the Nations introduc'd (with it) principles of Morality, and civiliz'd the People.

FOR take it with you as you go, Religion (I mean the Christian Religion) did not at its first beginning to spread itself in the World, indulge, or so much as allow the Vices common now to Christians; and winked at in Christian Nations, such as Avarice, Craft, Sly, and cunning Circumventing one another, Over-reaching, and fraudulently Cheating in their Dealings, and all the little nameless Cheats and Chicaneries of Trade.

THE Christian Religion infus'd principles of Honesty and Plain-Dealing; it recommended a general rectitude of the Mind, a known integrity of Principle, a just and upright Conduct

under the awe of an invifible Being, who infpected the minuteft Actions, and wou'd call to account for the moft fecret conceal'd Wickednefs; fo that in fhort, where the Chriftians became Traders, or engaged in Arts, Manufactures, and Commerce, there, who ever dealt with them were fure to find upright Dealing, punctual performance of every Agreement; the Hand laid upon the Heart was as facred as an Oath, and what the Mouth fpoke the Hands were folemnly bound by; in a Word, a general probity and exact honeft procedure govern'd all their Dealings; and this we cannot doubt encourag'd Trade, as to this Day we fee that foul, unjuft, and difhoneft ufage difcourages Trade, and drives away the Merchants even from Cities, and Nations, as well as Perfons.

BUT this Country and the *Belgi*, that is, the *Flemings* and *Dutch*, embraceing the Chriftian Religion, within fixty or feventy Years after their firft coming under the *Roman* Dominion, it may be faid of them, with truth, that they fooner than other Pagan Nations felt the civilizing influences of Religion; by how much they with a greater willingnefs and forwardnefs embrac'd the Religion itfelf; for 'tis remark'd by the Writers of our Hiftories, in the Story of *Joseph* of *Arimatea*, who was the firft Apoftle of the *Britains*, that the People moft gladly, and with the greateft fimplicity, that is honefty and integrity, receiv'd the knowledge of CHRIST.

THUS, and I think with great juftice, I obferve the fettling Commerce in this part of the World to be the genuine, natural product of the planting Religion, and *Roman* Liberty here together; and 'tis obfervable to this very Day, that Trade flourishes

rishes upon the same Foundation, and declines as that Foundation sinks and decays, (*viz.*)

I. LIBERTY, for securing and preserving Property, without which Commerce cannot be safe.

II. HONESTY, for the introducing just Dealings between Man and Man, on which depends Credit, which we find by experience is the life of Trade.

Now in these two Cases the Juncture I speak of was particularly eminent; (1) The just Government of the *Romans* establish'd Peace and Liberty, and (2) The Christian Religion coming in upon the very track or footsteps of the *Roman* Conquests, that Religion (to the immortal Honour of its very Name in the World) inspir'd its Professors with just Principles; forming their Minds by the Rules of all moral Virtues, as well as with the awe and fear of a divine Power, a righteous Judgment, and a futurity of Reward; on both these Foundations the World became more habitable than before; and Men enjoying the Tranquillity, which was the consequence of just Government, apply'd themselves to Industry and Labour; hence Arts and Learning flourish'd, and in consequence of the first,

Trade and Navigation.

TRADE began gradually in this part of the World by three eminent Encouragements, besides what I have already mention'd.

I. THE situation of the Country advantageous for Commerce.

II. THE

II. THE diligence and application of the *Belgi*, that is to say, the *Netherlanders*, by whom I am to be understood to mean, the Inhabitants of the Country from *Picardy*, or the Mouth of the *Some*, to *Bremen*, in the Mouth of the *Wefer*, or at least to *Embsen*, at the Mouth of the River *Ems*.

III. BY the finding the Wooll of *England*, which was so easily adapted to Manufacture, and which we find was employ'd to that end in *Flanders*, and the rest of the *Low Countries*, even before the *Romans* quitted their footing; for we find mention made of the Wooll of *Britain* being transported to the Country of the *Belgi*: Thus the *Romans* employ'd the Ships of the *Britains*, in which they us'd to transport Wooll and Cattle to the said *Belgi*. So much for the first knowledge of Trade in these Parts of the World.

UPON the like Foundations the Commerce of the *Baltick* naturally comes to our knowledge; and Nature furnishing Materials, Trade became a Consequence: Three principle Articles of Commerce push'd natural Industry upon methods of Trade in this part of the World. Namely,

I. NAVAL Stores, by which they first supply'd themselves, and then other Nations, for the building and fitting out Ships; for these naval Stores, first came in use by supplying their own Occasions; and then became a Merchandize for supplying others: These naval Stores were,

I. TAR, from whence also Pitch, which is almost the same Species,

N. B. Is

N. B. It is very remarkable, that Tar was long in use before Timber and Plank were known to be wanted in building Ships; the first Vessels, tho' call'd Ships, being no more than Osiers, and small pieces banded together with Withs, and after with Ropes, and cover'd with Skins, all being thicken'd, and as it were daub'd over (as the Ark was) within and without with Pitch, which is Tar.

2. HEMP, of which, by the help of Industry, they did then as they do still, make their Cordage and Rigging for such Ships as they had.

III. COPPER and Iron. Sweden, and the Countries on both sides the Bothnick Gulph abounded in these Mettals in the most early times; and as Nature made these things necessary to Trade; and that the Merchants carry'd them by Sea almost as soon as Ships were had in the World to carry them: So we find the Teutones, that is to say, those Germans that inhabited the remotest Shores of the Baltick, whither the Romans never came, or but seldom if they came at all, and never conquer'd, nor the Saracens neither, were some of the first Merchants in these Northern parts of the World, and navigated the most dangerous Seas, even when their Ships were but mean little Wicker-Work Boats, cover'd with Hides and Pitch, as above.

BUT to go back to the Romans, as I have said, that as a State they never meddled with, much less encourag'd

encourag'd Trade; yet (*) a late Author will have it that they establish'd a College of Merchants, and that they sent Fleets to the *East Indies*; yet even that very Writer acknowledges (†) what I have here advanc'd in these express Words, *That they sought rather to extend their Dominion than the Arts and Exercise of Commerce*; and he owns also that they had no Navigation but coasting about, very rarely hazarding themselves into the open Sea: *Strabo* indeed reproaches *Eratoſthenes* with Ignorance, and says, that the Antients made longer Voyages than the Moderns, and extended their Commerce to the utmost end of the World; but this Age wou'd laugh at *Strabo*; nay *Strabo* wou'd laugh at himself if he was now alive, and was to see to what an extent Trade and Navigation also, is now carry'd, and what Ships the Merchants, as well as the Nations of this Age make use of.

BUT to return to the Trade, which it is pretended, the *Romans* carry'd on, and which the same Writer boasts of very much; 'tis plain it amounts to no more than this, namely, that the *Romans* (to give it you in his own Words) allur'd by the rich Merchandizes of the *Indies* sent their Fleets thither every Year.

NOW those Colleges of Merchants, which the *Romans* erected in *Rome*, were no more than what we see practis'd in several Cities in *Europe*; and in *London* in particular; I mean forming Societies of the several Trades, such as there is at this Day, and under the same title, namely, Colleges of Trades at *Brussels*: In *London* they are call'd Companies and Corporations; the several Handicrafts and

(*) *The History of Navigation and Commerce*, page 153.

(†) *Ibid.* Sect. 9. page 159.

and Shopkeepers forming Societies among themselves, to establish *By-Laws* and Customs, for the better carrying on and the regulating the Art and Mystery of their Profession; and as the Word *Merchant* was then understood, and is so still, in almost all Countries but in *England*, it is evident it meant no other then Handicrafts, &c. As to foreign Commerce and Merchandize (as we understand the Word;) the *Romans* 'tis true knew very little of it, and the little they knew was chiefly for the furnishing the great City of *Rome* with Provisions and Corn; which City was so large as indeed almost to employ all the Shipping, at that time, in the World; of which Shipping I must in the next place say a word or two.



CHAP. XV.

Of the Navigation in and for sometime after the Romans; and how mean a thing their navigating Skill must be in those Ages.

WHO ever reads the History of the Wars between the *Carthaginians* and *Romans*, which were call'd the *Punick Wars*, as also the Wars of *Caesar* and *Pompey*, the Battle of *Actium*, with the other most memorable Transactions at Sea in those Days; and how big the ignorant Writers of those Times talk'd of them; wou'd think great matters were done, and mighty skill in Navigation was arriv'd to, which on the contrary, when we look back to, and compare with our Times, we see to be all grossly ignorant, and even ridiculous.

IN the Fight between the *Romans* and the *Carthaginians* off of the Coast of *Sicily*, the *Carthaginians* being worsted, lost 130 Ships; the *Romans* and *Carthaginians* often after that fitted out great Fleets of Ships; what they were I have already enquir'd, and how little they deserv'd the name of Ships; let me add to it only this, that the *Corinthians* built a great Ship which had forty Banks of Oars; this help'd to explain the Word *Bank*; no Man will be so stupid as to think this Ship had forty rows of Slaves or Soldiers rowing, one row above another; that wou'd have infer'd a Ship of forty Decks, one above another; but a Bank, as the Word was then us'd, intimates no more than this, (*viz.*) a *Bench*, on which sat three, four, or five Men to rule or move one great OAR; and of these, this great Ship of *Corinth* (for it was thought to be a Monster in those Days) had forty Benches or Banks of Oars; that is twenty Oars on a *side*, as Sir *Walter Raleigh* thinks; but if it was meant forty of a Side, the Ship being so very large it might perhaps be so without any thing in it Miraculous.

BUT that the Antients may boast with good ground of their extraordinary knowledge in Ship-ping; they tell us of a vast Fleet that *Sesosthis* King of *Egypt* built in the *Red Sea* of 400 Sail, or 400 Ships rather; for so the Story expresses it; and I will not undertake that all or any of them had Sails, or that the use of Masts and Sails was then known in the World: Then they tell you of another monstrous Vessel (Ship they call it) built by the same Prince, of 240 Cubits long; and another *Egyptian* Ship, which *Lucian* mentions, which was 120 Cubits long, thirty in breadth, and twenty nine in depth; all, which supposing them to be true, amounts to no more, in my judgment, than long Troughs, which they us'd to carry their
Luggage

Luggage in upon the *Nile*; and we see every Day our Western Barges, in the River *Thames*, above 100 Foot long; and if they were four times that length, if the Navigation of the *Thames*, like that of the *Nile*, was always calm and smooth they might easily float with their Loading.

THUS we see in *Flanders* long narrow Vessels call'd *By-landers*, because they go in the narrow Canals and little deep Rivers in that Country close by the Land; some of these are longer than a Ship of 200 Tons; and thus, if we are not misinform'd, the antient *Muscovites* had Vessels on the *Wolga* which carry'd a vast Burthen down that mighty River to *Astracan*, and as I have heard, wou'd carry 1000 Men, and Weight in proportion; and had each 110 Men to manage them; and I have been told, that they built them at *Wologda*, in the Northmost part of that River; and when they had perform'd the Voyage (which was above 1800 Miles) they pull'd 'em in pieces, and burnt them, using smaller Boats to come up the River against the Stream: These Boats, which I say I have been told of, they call'd *Balatoons*, and might be as big as *Sesostris's* great Ship, and perhaps as good.

SUCH Ships as these are therefore not to be mention'd in the account of Shipping, which we are now speaking of; the *Roman* Accounts of their own Affairs will convince us that their Ships were but sorry things compar'd to what we now call Ships; young *Pompey* keeping possession of *Sardinia* ravag'd the Coast of *Italy* with his Piracies, and almost starv'd the City of *Rome* for want of Corn; but when they come to give an account of *Pompey's* Ships: [See the formidable description,] they were row'd with Oars, and cover'd with Leather, and carry'd sixty Men each. At length the *Roman* Consuls to quiet the People were oblig'd to build a Fleet to fight *Pompey*, and

clear the Seas; and this Fleet was built and fitted out to Sea, as we see by the account of it in about six Weeks time, and *Pompey* routed: What Ships they were, may be a little guess'd at by the time they took up in building and fitting them out.

AUGUSTUS and *Anthony*, soon after this, had a great Sea Fight, call'd the Battle of *Actium*; History is not agreed about the number of the Ships they had on either side; but the lowest Accounts speak of 200 on each side; and the highest speak of three times that number.

IN the Punick War the *Carthaginians* defeated the *Romans* at Sea, because they had bigger Ships, and were more expert in managing them; that is to say they were better Seamen than the *Romans*; and that was (by the way) because they were better Merchants, and enur'd to the Sea by the consequence of the vast Commerce which they carry'd on, which the *Romans* knew little or nothing of: On this account the *Romans* were oblig'd to build larger Ships, and get *African* and *Sicilian* Seamen to match the *Carthaginians*; and then adding their own Landmen, who were better Soldiers than the *Carthaginians*, they by that means came to match the *Carthaginians* at Sea; and if they had not done, so they had never reduc'd them as they did.

BUT we are told, that all this while the *Romans* made Voyages to the *East Indies*; six Lines will explain that whole Article, so much boasted of: Let us see what this great Voyage to the *Indies* was. *Solomon* we allow and the old *Phœnicians* had bigger and better Ships than the *Romans*; for the knowledge of Marine Affairs receiv'd such a blow in the destruction of *Tyre* that it was never fully recover'd; and again, by that of *Carthage*; the *Romans* applying themselves (as I have said) to
Conquests

Conquests not to Trade, and to Victory not to Navigation.

BUT the *Romans* made Voyages to the *East Indies*. How? [See the same Author mention'd before.] Following the Foot-steps of that famous Conqueror *Alexander Magnus*, they made Voyages to *India* towards the Mouth of *Euphrates*: This discovers evidently the thing. The Mouth of *Euphrates* is known to all the World; that River, in conjunction with the *Tigris*, and other great Rivers, falls into the *Persian Gulph*, not into the open Sea: So that the *Roman Fleet* did this, they sail'd or row'd down the *Red Sea*, along by the Coast of *Mecca* and *Mocha*, and then passing the Straights of *Babel-Mandel*, turn'd away to the East, keeping close under Shore, by the South-Coast of *Arabia Felix*, till they came to the *Persian Gulph*, which is the Mouth of *Euphrates*; crossing which, in that part where it is so narrow, at the Island of *Ormuz*, the other Shore immediately begins the *Bactrian* Country, which is the true *India*, now subject to the Great *Mogul*; and coasting but a very little farther you come to the River *Indus*, from which the whole Country takes its Name; and where *Alexander* reduc'd *Porus* the *Bactrian* or *Indian* King.

THIS is the mighty Voyage to *India*, of which so much is said in honour of the *Roman* Merchants, which considering the calm Seas and warm Climate, at those Seasons, and in that Latitude, is no more than our Seamen wou'd boldly attempt at any time in a *Gravesend-Wherry*; and I must say, and I believe I speak with Reason; that for a *Gravesend-Wherry* to go down from *Gravesend* to the *Downs*, and cross over the Sea there to *Calais*, which they frequently do, is a much more dangerous and hazardous thing than all those famous Voyages to the *Indies*.

Y E T

YET it is allow'd that the *Egyptians* had larger and better Ships, and so had the *Tyrians* also, and the *Carthaginians*, than any the *Romans* had or knew how to have; and it might be in those *Egyptian* Ships that the Voyages to the *Indies* were made: Hence they tell us that *Mark Anthony* when he brought up his Fleet from *Alexandria* in *Egypt*, to fight *Octavius*, when he enter'd the Mouth of the *Adria*, that is, of the Gulph of *Venice*, call'd still the *Adriatic Sea*; *Octavius*, who fitted out his Fleet at *Ravenna*, tho' he had thirty Ships more than *Anthony*, yet was doubtful of engaging till he had seventy Ships more from *Patras*; because *Anthony's* Ships, built in *Egypt*, were larger and stronger than those of the *Romans*. This a full evidence of the Fact.

BESIDES this, 'tis evident they distinguish'd between Ships of War and Ships of Burthen; as we do (tho' with a juster Cause) to this Day. The Ships of Burthen were only carry'd by the Winds, and with the help of their Sails; whereas the Ships of War were light and nimble, and being carry'd every where by their Oars, were adapted to fight and pursue: Of these Ships of Burthen, it seems the *Romans* had none; and were oblig'd to hire them of the *Liburnians*, who were Merchants; that is to say they were us'd to fetch Corn from *Egypt* for the supply of the City of *Rome*, and of the Country round it, which was so prodigiously populous, that besides *Rome* itself, which had at that time several Millions of People in it, *Naples*, *Capua*, and many other Cities of *Italy*, which were exceeding populous; and *Italy* itself, even with the Corn of *Sicily* adjoin'd, was no way able to supply them; but they fetch'd Corn from *Egypt* in very great quantities, and from all the Coast of *Africa* besides.

HAVING

HAVING thus plac'd the boasted Navigation of the Antients in a true light: Where must we look for the rise and beginning of the present knowledge of Navigation, and the skill of managing as well as building the great Ships, which we see made use of in the Commerce of the World, at this time? It is evident it must be lookt for in these Northern parts of the World; where the Seas being more dangerous, and the rapid and uncertain Tides, frightful and terrible to Sailors, as Antiquity furnishes us with many evidences to prove, requir'd stronger Ships.

*Britain, where boisterous North Winds blow,
And Tides uncertain ebb and flow,
The Sailors dread ———*

WE are now to suppose the *Roman* Empire declining; and if you please suppose them quite sunk, tho' it was some Ages a sinking, as such Bodies may be suppos'd to struggle long, or as we call it *to die hard*; I say suppose them sunk and gone. The barbarous Nations which over-run the *Roman* Empire had no more view at first, to Commerce and Navigation than the *Romans* had before them; so that the Conquests and Inroads made by the *Vandals*, *Goths*, *Gauls*, and *Saracens*, were all carry'd on by their Land Forces; nay, it is very remarkable that even all those barbarous Nations, which over-run the *Roman* Empire, came from such parts of the World, and by such several Routs as made the use of Shipping and Navigation entirely needless to the Conquerors. For Example:

ITALY was the center, to which they all directed their March; by the situation of their
several

several Habitations before, we shall easily see the Rout they took to come to *Italy*.

THE *Hunns* coming out of *Pannonia*, now *Hungary*, *Transylvania*, and *Valachia*, march'd thro' *Croatia*, *Carinthia*, *Austria*, *Stiria*, &c. into *Lombardy*: There was no Sea in this way, nor any occasion for it, to bring their Stores or Provisions, which all march'd with them; and for which they had always an infinite number of Carriages.

THE *Sarmati*, which came from the confines of *Muscovy* and *Poland*, and from all the remote Countries both Southward, upon the *Borysthenes*, and Northward, upon the *Vistula*, came either into *Thrace*, and so bent their course towards *Constantinople*, which was then the Seat of the *Roman Empire*, or marching through *Moravia*, and *Austria*, came into *Lombardy* through the Country of *Trent* and *Tirol*.

THE *Saracens* were an Eastern, or rather a Southern People, and advanced from *Arabia* and *Syria*, into *Egypt* and *Africa*; or directing their march Northward fell into the Lesser *Asia*, *Capadocia*, and *Bitbynia*; and all this was still effected by Land; nor had they one Ship, or the least occasion for one.

AGAIN the *Goths* and *Vandals*, the *Cimbri*, and the *Heruli*, take them separately or together; they came from the Northern parts of *Germany*, and the Banks of the *Neckar*, the *Main*, the *Elb*, and the *Havel*; and still all of them came by Land, passing into *Italy*, by the Mountains of *Tirol*.

Lastly,

Lastly, THE *Gauls* did the same by the *Alps*, partly through the Duchy of *Savoy*, and the Country of the *Grisons*, or through the *Gallia Narbonnensis*, and so through the Country of *Provence* into the *Genoëse* part, and by the Vallies of *Piemont*.

BUT take them all from their respective original Habitations, they had not one Ship employ'd in the whole World, towards the reduction of the *Roman Empire*, or of any of their Allies; except such as the *Saxons*, and after them the *Danes* embark'd in, for the invading of *Britain*; and these must be very poor and indifferent Things, if we reflect upon a Naval Engagement, or Sea-Fight, between the *Britains* and the *Saxons*, upon the Waters of the River *Lea*, between *Waltingham* and *Ware*, which is now all dry Land.

THIS brings me back to the Case in Hand; As the *Romans* made little or no improvement of Ships, or of Navigation, in raising their Empire to that pitch of greatness, which it was once arriv'd at; so the barbarous Nations, which invaded, and at length overthrew the *Roman Empire*, had no Ships, and indeed no occasion of any in the ruin and reduction of it.

WE must come on therefore farther forward than this, for all the improvements and encouragements of Navigation in the World, and of Trade also.

THREE or four Articles of Commerce, as the source of what follow'd in Navigation, may give us a light into the History of it.

I. WHEN the *Goths* and *Vandals* over-run one part of the *Roman World*, they push'd principally into *Spain*; and taking a quiet peaceable possession of all that rich Country, which was

B b

more

more than the *Romans* could ever do; they found principles of Commerce in the very Earth; and as they brought principles of Liberty with them (for the *Gothic* Governments, which are the very same upon which the *British* Liberties are formed, were all such as establish'd Government on the foundation of Property) this, and the *Goths* withal receiving very early the Christian Religion, was the Reason that they became, *wherever they settled*, a most diligent and industrious People, quiet, laborious, and simply Honest; and accordingly in *Spain*, finding Materials in the very Earth, and upon it, they, sooner than any of the other Nations, began to apply both to Commerce and Navigation.

It is true, they were, after some Ages, invaded from *Africa*, with a swarm of Locusts, call'd *Saracens*, who as the Locusts are said to eat up every green thing, so they swallow'd up and devour'd all the Industry of the *Goths*, and even the People too; in a word, they over-run the whole Country, except the two smaller Provinces of *Biscay* and *Guipuscoa*.

THESE retain'd their Liberty, and their Country being withal Mountainous, and of difficult Access, was also so well defended, that the *Biscayners* boast to this Day, that their Race is pure native *Spain*, and that they are not at all mixt with the *Moors*, either in Blood or Religion.

As these *Biscainers* retain'd their Possessions, notwithstanding the infinite swarms of the *Saracens* which came over; for I think the first attempt they made was with 600,000 Men: So the diligent People of *Biscay* finding great plenty of Iron and Steel in their Country, they apply'd themselves to the Manufacture of it; and after that,

that, by the necessity other Nations found themselves in of a supply of things so useful to them, Ships grew necessary to encourage and push on that Commerce: Hence they tell us, that *Bilboa* and *Fuenterabia* were the first Building Ports in *Spain*; that here they not only built Ships but employ'd them also; and that by this means they began to correspond with the rest of the World, with their own Ships carrying out their own Manufactures, as also to encourage other Nations to do as they shew'd the example.

WHILE the *Biscainers* appear'd thus to be the great and first Navigators in the Northern part of the Empire; so the *Venetians* were the next, whose rise is merely owing to the necessity of Trade; I say the necessity of Trade, for they had no other way to live: First, For their Preservation from the flood of the barbarous Nations, who tore the *Roman* Empire to pieces, they were driven to the necessity, or at least saw it for their purpose to retire into such places where they might best defend themselves; and where the situation made it impracticable for their Enemies to attack them but by Sea: This retreat put them necessarily upon providing a sufficient Strength of such kind, to preserve themselves in case their Enemies should get Ships to attack them, or as the nature of their Circumstances requir'd. Thus Nature wrought in both Places, (*viz.*)

I. THE Bay of *Biscay*, a rough, tempestuous, angry Sea, and famous to this Day for exceeding great and hollow Waves, naturally drove the *Biscainers* to contrive such Vessels as might bear out against the roughest Weather; and they soon by their hardy Adventures obtain'd the credit of bold and expert Seamem: They grew famous too in Trade, for their Iron Manu-
B b 2
facture,

facture, making all sorts of Armour, Weapons, and Habiliments of War; and for Swords the *Biscay Blades* have preserv'd the Reputation of being the best temper'd, and of the hardest Metal in the World, even to this Day.

II. *THE Veneti*, as is said above, became early Navigators in the *Adriatic Gulph*, by the very same necessity of their Circumstances; for they having retir'd from the fury of the *Heruli*, and afterwards of the *Lombards*, into the fastnesses and defences of the Islands, near the Mouth of the *Po*, and of the *Adige*; as they form'd themselves into a strong Body of People, they were soon in a condition to preserve themselves from Invasion. But how should they do to subsist? For the Islands, to which they retreated, cou'd not supply them with Corn, or any other Provisions; they were therefore oblig'd, or we may say, forc'd to go out to Sea, and look abroad for Bread: This naturally put them upon building such Boats or Ships (for Boats, as we call them now, were call'd Ships in those Days) as those Occasions call'd for.

WITH these they rang'd the Gulph for Corn, whether they sought it in the honest way of Trade, by Buying and Selling; or that, driven by necessity, they rov'd about the Seas, and made descents upon the Country, taking it where they could find it; that we cannot determine at this distance of Time: It is not improbable, but that the last was their Case; for what Merchandize could they have at that time to exchange? And for Money, it may be suppos'd, that flying, as they did, from the fury of the Barbarians, with their Wives and their Children, they could not carry any great stock with them.

HOWEVER

HOWEVER it was, be it by Piracy and Roving, or by plain honest Buying and Selling, it is not material, but they soon became eminent for Sea Affairs; and in process of time venturing out into the *Levant*, and into the *Ægean* Sea, they found the way to *Italy*, and to the antient *Greece*, and among the rest to *Egypt*; from whence bringing back not plenty of Corn only, but the Manufactures of the *East Indies*, of which we have already said so often, that they had for some Ages been brought from *India* to *Sues*, either by Sea up the *Arabian* Gulph, or by Caravans through *Arabia* from *Cape Fartack* and *Bassora*, in the *Persian* Gulph, to *Aleppo* and *Scanderoon*: By this means the *Venetians* rais'd such a Reputation for Commerce and Navigation, and came into it so soon too, that they were for many Ages the Mart for the Silks, Drugs, and Spices of *India*, *Arabia*, *Æthiopia*, and *Persia*; and by it rais'd a general Correspondence and Commerce, with all the Nations of the World; nay, and they held it too, till within these 300 Years, as I shall shew it in its Place.

IN these thriving Circumstances we cannot wonder at the Opulence of their Merchants, the Magnificence of their City, and public Edifices, or the Power of their Navies; by which, or by their Money, they made themselves Masters of a large extended Dominion, as well in the *Levant*, as on the *Terra Firma*; for the extent of their Government was indeed exceeding great; and in a few Ages we find them Masters of all the great Islands of the *Levant*, particularly of *Cyprus*, of *Candia*, of *Scio*, and *Negropont*; some by Conquest, some by Purchase: They were Lords of all the Isles of the *Ægean* Sea, of all the antient *Peloponnesus*, now the *Morea*; they possess all the Coasts of *Attica*, *Achaia*, and *Epirus*; they commanded

manded all the East-side of the Gulph, except *Ragusa*, and *Dulcigno*; they had the whole Coast of *Dalmatia*, *Istria*, *Croatia*, and *Friuli*, besides the Countries which they still possess in *Lombardy*, such as *Verona*, *Padua*, and many others.

ALL this, or the greatest part of it, was owing to the superiority of their naval Strength, which for many Ages, was the greatest, as it was certainly the first of its kind in the World; nor have they ever been overmatch'd in naval Strength by any of the Powers in that part of the World, till the *Turks* seeing a necessity of being able to give them a Check, set seriously to work to raise a Fleet superior to them: This was not till the fifteenth Century, when *Bajazet* the Second fell upon them, and took the *Morea* out of their Hands.

HOWEVER, in the several Wars they have had with the *Turks*, they have very often fought the *Turkish* Fleets, however powerful, and generally have been attended with Victory, especially in the great Battle of *Lepanto*, Anno 1457, of which the World has heard so much; and where the *Turks* lost seventy Gallies, 30000 Men kill'd, and 20000 Christian Slaves set at Liberty.

THIS greatness of the *Venetian* State, as it was rais'd by Trade, and particularly by that Branch which I have mention'd, namely, the *East India* Trade, in *Silks* and *Spices*; so when the *Portuguese* found a nearer way to the *Indies*, by the Cape de *Bon Esperanza*, and thereby furnish'd Europe with *East India* Goods on cheaper terms, the *Venetian* Greatness felt the mortal Wound, and presently fell into a sensible decay; *Lisbon* encreasing in Wealth as *Venice* visibly declin'd.

III. HAVING thus given Instances of two sorts of People who first fell into Trade, and gave encouragement to Navigation, after the declining

clining of the *Roman* Empire. I come now to two more Nations, who, tho' they did the same, and much about the same time, yet we cannot say it had any dependence upon, or was at all influenc'd by the rise or decay of the *Romans*; but they were rather brought into it by the consequence of things; such as the situation of their Country, the Genius and the Circumstances of their People, and above all the rest, by the necessities of Trade; and these are the *Teutonick Germans*, a sort of religious People at first, and who for Religion conquer'd the *Goths*, which inhabited the Southern Shores of the *Baltick* Seas, where they settled themselves for a long series of Ages; always encouraging the People they conquer'd to apply to Trade and Industry. Thus they grew rich and formidable in the World; and when afterwards they sunk as a Government, or Body Politic; 'tis evident, that it was not by a decay of their Commerce, for that continues still, but by the fate of the Times, and the clashing of the several neighbouring Interests which overthrew them; of which I may speak again in the next place.

I HAVE mention'd already, how those *Teutonicks* were now become the Inhabitants of *Prussia*, *Courland*, and *Pomerania*, from the City of *Stralsund* to that of *Dantzick*, *Koningsberg*, and up quite to *Riga*, *Revel*, and *Narva*, and were naturally brought to joyn together for Commerce: How their naval Stores grew from being a Supply for their own use, to be a Merchandize for other parts of the World. I need therefore only add, that this necessarily brought them to building of Ships, and that, such Ships as might be able to bear the shocks of those Seas, and carry the heavy Loadings of Iron, Copper, and other things of like heavy

heavy Carriage from one part to another, encouraging the World by their example to build large Ships like theirs, and to come in with them into a share of so gainful a Commerce; nor was this all, but these *Tuetonicks*, I say, came gradually to be the carriers of those Seas, by the considerable Correspondences which they held on, and the Figure they made; nay they became the most powerful as well as the richest People of all the Northern part of the World.

IN consequence of this Wealth; They possess a large and powerful Territory upon the *Vistula*; also several Provinces, as *Livonia*, *Courland*, the Ducal *Prussia*, with much of *Poland* and *Lithuania* in their Hands; and so powerful they were at Sea, that to whomsoever they lent their Ships, they were sure to conquer their Enemies.

I NEED not enter farther into their History: I am now talking of them as Merchants and Navigators; and as such, they were very considerable: As to their being *Teutonic Knights*, or of such an Order; and how they came to obtain the Honours and Dignities they enjoy'd, and how to lose them again, that's matter of History, and no part of my present Undertaking; 'tis enough that they rose by Trade to be the chief Navigators, and the greatest Builders of Ships at that time in the World, and that they came into the last, by the consequence of the first; I mean their mighty Commerce brought them to the building larger and bigger Ships.

NOR did their extraordinary Commerce die, tho' they (as a natural effect) went off the Stage, when they ceas'd as an Order of Knights; their Military Order died, but their trading Power rose higher; for a Confederacy of Towns joyning together afterwards to carry on that Trade, preserv'd

serv'd the trading Interest, and grew greater than ever they were before: These are those we now call *Hans-Towns*, of which the principal Places that retain that Name, and who are still a kind of Common-Wealth of Trade, are the Cities of

Hamburg,
Lubeck,
Bremen,
Dantzick, and
Koningsberg.

ALL these Towns are to this Day potent in Trade, and likewise in Shipping; and all except the last, have always, as occasion requires, Ships of War in their pay, for the protection of their Trade; and formerly have been able to fit out large Fleets, and to engage with other trading Countries in an open War; tho' now as they are too weak, so they have no occasion for that part; yet they fit out Men of War often times to convoy their Ships from the Pirates or Privateers of neighbouring Nations when they are at War with one another. But,

IV. THE fourth Article is that which I mention'd at first, (*viz.*) The *Dutch*; who, besides what I have said already, began very early to fit out Ships. and carry on a separate Business in these Northern Seas for the catching and curing of Fish.

WHAT height of Improvement this Fishing Trade has been to Navigation as well as to Trade, our present experience abundantly shows; since the *English* and *Dutch*, who have now the greatest share of the Fisheries of the Northern World, are become by consequence the most
C c powerful

powerful Nations as well in Trade as Navigation.

ALL this while however Navigation was wrapt in its swadling Clouts; the Mathematicks, by which it is now wholly govern'd and regulated, had no concern with, or at all related to it; a very little share of Astronomy seem'd to inform the Sailors; as which was the *North Star*, which the *Ursa Major*; and these, and a few Constellations more, serv'd them so as to guide them to find Land again when they were out of their Knowledge: But all this while they had neither discover'd Guns to fight with, or Compasses to sail by, but coasting, and creeping about within sight of Land was generally the utmost of their Art: How they advanc'd beyond this, and by what degrees they came to the perfection of Marine Knowledge, which is the present State of Navigation as a Science; and what infinite Advantages have been made of it in carrying Trade and Discovery up to the present height: These I shall begin to discourse of in the next Chapter.



C H A P. XVI.

How and by what degrees Trade (when set on foot in the World) spread and extended itself from one Nation to another; the Time, the Occasion, and the Consequence; and also of some New Discoveries made in the World of Trade during those Times.

THE periods of Time, in which the things mention'd in the last Chapter, shou'd be stated, and that we may preserve Chronology in our History as we go along, take in few Words thus.

THE Roman Empire may be said to be quite defunct when Charlemain King of France possess Italy and the Roman Emperor resided at Constantinople, having no power to prevent the ruin of it, and this was about the Year 800.

THE State of Venice was founded in the Year 453, but they did not arrive to their full Independence, and to act in Trade, and set up Liberty, till the Year 1120, or thereabouts.

THE Teutonick Knights began their Conquests and Progress Anno 1222, or thereabouts. Their Business was first reducing the Pagans (*Prussian* Inhabitants) by force to their Obedience, and planting the knowledge of the Christian Religion among them: Thus far their planting in *Prussia* was really a *New Discovery* to the World,

at that Time: As for the *Poles*, the Country of the *Sarmatae* had receiv'd the Gospel, and all *Poland* and *Lithuania*, 'as it was then prescrib'd and limited, were become Christians some Years before these Provinces of *Prussia*, *Courlandia*, *Samogitia*, and *Livonia*, heard any thing of it, or at least before they could be brought to entertain any sense of it themselves; all attempts to plant Religion among them, of which kind many it seems had been made, remain'd long ineffectual: A certain brutal Obstinacy particular to the People of those remote Countries prevail'd so far, as to make them reject all the offers that had been made for their Good, and embrace their Idols and Paganism with such an unmoveable Attachment, that nothing could at last remove them but Force and the Sword.

N A Y, if we may give Credit to Historians, and those Men of Credit too, *Paganism* is not to this Day entirely rooted out of some of these very Provinces, but that the People in the mountainous part of *Samogitia*, and the *Folish Prussia*, the Desert of *Waldshont*, and even some part of *Courland*, worship the antient Idols and wooden Images of the Pagans, and keep them in their Houses; nor can they be brought to know any thing of the true God, or entertain any notion of it, or of the Christian Religion, or of Sabbath-Day, or Working-Day, nor will they hear of it, but with jest and ridicule.

B U T I am not writing of improvements in Religion, or giving a History of new Discoveries in matters of Worship, or the knowledge of God, but of improvement in Commerce and Manufactures; discoveries in Art, Science, Navigation,
and

and Plantation; and therefore I return to my Subject from whence this is but a Digression.

THE *Teutonic Knights* were a set of Men form'd into a religious Order for the Conversion of the Barbarians, and spreading the Christian Religion in the World, in those good old Days, when Zeal ran before, and Devotion, tho' with *too much* Ignorance, rod behind. And when the Nations of *Europe* took up the Cross, as it was then call'd, that is, lifted themselves at the beat of the Churches Drums to go and drive out the Heathen from God's Heritage, which it is evident he had forsaken, and given them leave to overrun, and to enclose God's Common, which he himself had laid open, as is apparent from the Circumstances.

THAT they ran before they were sent; that they neither had his help in the Undertaking, or his Blessing in the Success is evident from the confus'd manner of carrying it on as well as their being visibly abandon'd in the conclusion of it; so after some Ages spent in the Attempts, some Millions of Lives lost, and an infinite mass of Treasure, the *Saracens*, to whom God seem'd to give a more special Mission, prevail'd over them all; so their Eyes began to be open'd, and they thought fit to abandon an Enterprize which had neither human Prudence, or the ordinary success to encourage them in it.

UPON this melancholy giving up that Cause, what was to be done with the several sworn Societies of Devotees, who calling themselves Knights and Servants of Christ, had vowed their Lives and Prowess (as they call'd it) to fight for Religion, and in the Language of those devout Days, to *help the Lord against the Mighty*. The *Knights Templars* and *Knights Hospitallers*; for those two forts were the chief, settled, some here, some there, as the Princes and

and Powers of *Europe* wou'd entertain them ; till in time they became so insolent, so wicked, and so dangerous, that the Princes and Powers, who had been their Patrons, thought them unsufferable, and expel'd and rooted them out, in all Nations ; the only remains of them in the World at this Day are the Knights of *Maltha*, of whom I have little or no occasion to speak in this Work.

BUT another Branch of them, wandering from *Syria*, and almost destroy'd by the *Turks* under the victorious *Saladine*, were it seems call'd Knights of our *Lady of Mount-Sion*. As these were instituted by *Conrade* the second Emperor of *Germany*, so they were at their first Institution restrain'd to be all of that *Nation*, and were therefore call'd *Teutones*, that is to say *Germanis* ; and from this being call'd Knights of the *Teutones*, they soon came to be call'd *Teutonic Knights*.

AFTER they were thus, as I said, routed and driven out of the *Holy Land*, *Henry* Duke of *Masovia* in *Poland* invited them into his Country, and representing to them the condition of the Northern parts of his Kingdom ; how all that Country, now call'd *Polish* and *Ducal Prussia*, *Courland*, *Livonia*, &c. was still in the Hands of the Pagans ; and they offering themselves to the Work according to the Vows of their Order to propagate the Christian Faith, and to pull down Paganism, he gave them a grant of all the Lands they could conquer in those Countries ; and thus they began the War, in which, having fought many bloody Battles with the Pagans, for they did not tamely give up their Country, any more than their Idolatry, they at last reduc'd all *Prussia*, *Courland*, and *Livonia*, planting themselves (as well as the Christian Religion) in their room,

HAVING

HAVING thus gotten possession of the Country, they immediately began to build Cities, fortify Sea-ports, and strengthen their Possessions, finding the Country fertile and capable of Improvement. The Natives cleaving to Idolatry, were either extirpated by the War, or driven farther into the wild, waste Countries towards *Russia*, where Idolatry continued some Ages, and in the Northern parts of it, as among the *Samaoides* and *Petzoran* it still remains: The *Knights* invited *Germans* of their own Nation to come and settle under them; and thus the Country became Populous; Religion flourish'd, with Religion came in Liberty of course, and with Liberty Commerce; thus in a few Ages this Country became the most flourishing place of Trade in the World; also the People were call'd *Teutones*, and their Government *Teutonick*.

HERE, the Order commanding and growing powerful, they wall'd and enlarg'd *Dantzick*, built *Elbing*, and *Mariemburgh*, *Koningsberg*, and *Mittau*, *Riga*, and *Narva*, extending their Conquests from the first to the last, and establish'd their People in the possession of all the Towns upon the *Baltic* Coast within that compass, as also upon the Banks of all the navigable Rivers.

As the Government of the *Teutonick Knights* was thus founded on Religion and Liberty, which two Heads as I have observ'd, were the great encouragers of Industry and Application to Business; so the natural product of the Country led them as it were by the Hand into the several Species of Trade which they were to deal in; such as,

- I. **A M B E R**, found first on the Shores of the *Baltic*, in these particular bounds, I mean, of *Prussia*,

ſia, *Courland*, *Livonia*, &c. and perhaps (at that time) in no other part of the known World.

II. HEMP and Flax, things infinitely uſeful for *Cordage* and *Canvas*, the two moſt neceſſary things requir'd for the furniſhing of Ships, and for the helping on Commerce were then very young in the World.

III. PITCH, Tar, Rozin, all of them branches of thoſe great and neceſſary things uſed in Shipping, or of the one general Article call'd Naval Stores, and without which the Marine Magazines could not be fully furniſh'd.

IV. WHETHER they had Iron in this Country then, or not, Hiſtory is ſilent, but as we have good witneſs of its being long before that time found in *Sweden*, we need not doubt they found means to obtain it, in exchange for other Goods.

THUS began this great improvement of Trade in the *Baltic*: How this great Diſcovery, (as great and as uſeful in its place as that of *America*, has been to *Europe* in our Days) is ſince increas'd by ſeveral ſteps of improvement in Trade, to the magnitude which we find it in at this time, will be matter of farther Hiſtory in its Courſe.

How alſo after the ruin of this *Teutonic* Government, and after the Order itſelf ceaſed, a trading Confederacy was fix'd in that part of the World among the principal Cities, Sea-ports, and trading Towns of the *Baltic*, for the protection of their Commerce, and how other Cities, and in other parts of the World, came into that Confederacy of Trade, and were afterwards

wards call'd the HANS, or the Union of the *Hans-Towns*, of which I have more to say hereafter; I say all this will come to be spoken of in course. I have only to add here, that this call of the *Teutonic* Knights into *Prussia* was in the thirteenth Century, that is to say about the Year 1232, and not before: So long was it before the Christian Religion reach'd the Shores of the *Baltic* Sea.

THIS settlement of the *Teutonicks* in *Prussia* has been the foundation of all the Commerce of the *Baltic*, which without any bluster, is at this time one of the most flourishing Articles of Trade in *Europe*; and especially attended with this particular and very valuable Circumstance, that 'tis carryed on to the greatest extent with the least share of Money in Specie, of any Trade at this time known in the World.

ALL the Goods we send thither are such, as is most for our Interest to export: All the Goopds we fetch from thence are such, as it is absolutely necessary for us to import.

WHEN I speak in the first Person Plural or Nationally, under the terms we, and us; I mean not, *England* or *Britain* only, but us the trading Nations of *Europe*, taken complexly. *Spain* is the only Nation that may be said to send Money in Specie into the *Baltic*; but then *Spain*, till very lately, sent no Ships thither, but contented themselves with buying all their Naval Stores at second Hand from the *Dutch*.

BUT setting *Spain* aside; *England*, or *Britain*, sends their Ships for the *Baltic* loaden with *Fish*, *Salt*, *Lead*, *Tin*, *Pewter*, *Sugars*, *Tobacco*, *East India* Goods, and *Woollen* and *Silk Manufactures*; being all of them, except the *East India* Goods, the growth of our own Land, or Seas, the Manufactures

tures of our own People, or of our own Colonies, (which is all one); and all of which it is highly our own Interest to export, and which is, in one respect, clear gain to our Country.

ON the other Hand, what we fetch from thence is chiefly *Iron, Copper, Pitch, Tar, Hemp, Flax, Canvas, Linen Tarn, Pot Ashes, Russia Leather, Harts-horn, Amber, Sturgeon, Oaken Plank, Fir, Timber, Deals, &c.* in a word, all sorts of Naval Stores, without which our Navigation, and consequently our Commerce, wou'd be dear, and be but ill carry'd on, if it could be really subsisted in the present extent of it.

THUS much for the Trade of the *Baltic*. The Trade of the *Dutch*, and of the *French*, to the *Baltic*, differs not at all from ours, but thus,

THE *Dutch* fetch a vast quantity of Corn from thence, and carry a vast quantity of Herrings thither, more than we do; also Spices, Train Oil, and Whale Fin.

THE *French* fetch from thence just what we do, only they carry thither Wine and Brandy, Silks, Toys, Perfumes, Paper, and such things, instead of the Woollen Manufactures.

BUT take the Trade of all the three Nations. Here is neither Silver or Gold carry'd one way or other, but they trade infinitely to Advantage both ways without it; making good the deficiency or the balance of Trade upon one Nation, by Drafts upon another, and governing the whole by the Rates of the Exchange; which is generally negotiated upon *Hamburg*.

HAVING thus mention'd the State of *Venice*, and the trading part of the *Teutones*, or *Germans*, it follows to take notice, that about the same time the erecting the Woollen Manufacture in the *Netherlands*, and the Herring Fishing in the North came upon the Stage; and they were in
their

their kind two great Discoveries as well as Improvements in the World: I shall speak of their beginnings with that brevity, which not our present Undertaking only, but the remote Circumstances of the things themselves (and which History gives not much light into) obliges me to.

THE coming of the Herrings annually, and in their exact Season into these Northern Seas, and not in like quantities into any other part of *Europe*, as it is surprizing and unaccountable, so it must be taken notice of here, not so much on its own particular account, as to introduce the needful Improvements in Commerce, which have been the Consequence.

THE coming of the Herrings may be a discovery in Nature, but it is not a discovery of a new Country, or Colony, and consequently does not come in within the Head of Discoveries, which I am speaking of; but the discovery of them as a foundation of Commerce merits to be spoken of here, and on all suitable Occasions.

THE first fishing for Herrings in *Europe* was certainly in *Scotland*; Nature spread the Field of Treasure before them, which, however ill they have improv'd it, has been like the *Indies*, at their Door.

ALL the *Scots* Histories mention their Fishery as well as that of the *English*, almost as far back as they mention any thing of *Britain* as a Nation; but they do not speak of it as a Trade or Merchandize. The first I meet with of this is, that the *Dutch* used to send Vessels to the Coast of *Scotland* to buy salted Fish [Herrings] of the *Scots* Fishermen, which they carry'd home to their own Country for the Subsistence of their own People; and this I think may be trac'd back to the Year 836, or thereabouts; the *Saxons* then inhabiting

inhabiting *Britain*, King *Alfred* then governing the Kingdom of *England*, and by this Trade the *Scots* were greatly enrich'd, the *Dutch* paying ready Money for their Fish.

BUT time and want of forecast brought the *Scots* to differ with their good Friends and Customers the *Dutch*, and putting some hardships upon the *Dutch* in buying, prompted the latter to reject the *Scots* Fish wholly, and bring Nets and Vessels of their own, and catch as well as cure the Fish upon the High-Seas themselves, to the utter ruin of the *Scots* Fishermen, and in short to the great impoverishing that whole Kingdom, and as much on the other Hand to the enriching of the *Dutch*.

UPON this new step, the *Dutch* finding the sweet of the Trade, and finding the quantity greater than they could consume at home, they began to look abroad, and carry the Herrings cur'd and pickled to other Countries, to see if they could dispose of them to advantage. And thus this great and flourishing Trade began.

IF in the process of this Work we shall trace all the other considerable branches of the Trade of *Europe* to their infancy and beginning, and bring them down from thence to their present condition, and their probable views of encrease, we flatter ourselves it will not be an unprofitable, much less an unpleasant Discovery, and be what is perfectly agreeable to our Title, and to the meaning of this Undertaking. This beginning of the Herring Fishery as a Commerce, was about the Year 1320, not long after the encrease of the *Teutonic* Settlements in the *Baltick*.

AND much about the same time was the first considerable greatness of the Woollen Manufacture also begun among the *Flemings*, so that
the

the World seem'd all to launch out into Trade together. How they gradually went on we shall see in its place.

WHILE thus Navigation and foreign Negotiation began in the Bay of *Biscay*, and the Gulph of *Venice*, Exportation of Naval Stores in the *Baltick*, Fishing among the *Dutch*, and manufacturing of Wooll among the *Flemings*, we should enquire how stood things with *England*, *Portugal*, *France*, and *Spain*, which are now so considerable in Trade.

THE *Roman Empire* died, as I have said, about the latter end of the eighth Century, when the *French* or *Gallick Kings* took upon them the title of Kings of *Lombardy*.

As the several Princes usurp'd the royalty of the Dominions which they possess'd, the *Roman Power* not being able to prevent them, *England* among the rest fell to the lot of the *Saxons*; who first driving the *Britains* out divided this Country into a Heptarchy of Kingdoms; of which in process of time the greater devour'd all the rest, as is usual in like Cases: So began the Empire of *Charlemaign*, who was King of *France*, King of *Italy*, and Emperor of *Germany*, all at once: But that is by the way.

As the *Saxons* held the Monarchy of *England* with a short interruption from the *Danes*, till the coming of the *Normans*, we have good Reason in the Histories of those Times to observe, that *England* was all that while very little acquainted with Commerce; the Kings were taken up with continual Wars with one another, the common People being, as our antient Deeds and Charters of Lands express it, mere Slaves and Servants to the Lords. Vassalage and Villainage took up the whole mass of the People, and their whole employ seem'd to be to wait upon the Nobility, and
be

be at their beck, as we call it, to laquy it after them to the War, which took up the *first*, or to till and plow the Land, and do the drudgery of the Husbandmen, and this took up the *last*; as for Trade little of it was known, and of Manufacture nothing at all.

YET in all this time, as far as History may be depended upon for any thing, we find the *English* Nation were mighty Gay; the Nobility gave Badges and Liveries to their Tenants and Vassals; and the Clothes they wore were very fine: Whence then did they come? 'Tis evident they came from the *Flemings*, who made all sorts of Cloth and Stuffs; that is to say all sorts that were then known, and with them they supply'd all the Countries round them; to wit, *France*, *Germany*, *Spain*, and *England*; so great was the Manufacture in those Days; and this we are assur'd was so even long before that time we speak of, and even in the time when *Adrian* the *Roman* Emperor came into these parts of the World; for the Emperor *Adrian* visited in Person every part of the whole *Roman* Empire, as big as it then was; and it was then in the meridian of its Greatness.

THAT the *Flemings* then began to manufacture about the Year 260; tho' I have not positive proof, yet I see many Reasons to believe it, too long to enter upon here; and that they had their Wooll from *England* from the very beginning, I make no question; also it is very probable the Wooll of *England* was at that time an exceeding great Article; that is to say the quantity was very great for many Reasons, as I shall speak of hereafter: I say the *Flemings* in all probability began thus early to be Manufacturers; but it was some time before that Manufacture en-
creas'd

creas'd to the degree which afterwards we find it arriv'd to.

BUT this leads me back to the Subject in Hand: Necessity introduc'd Manufacture; for the People had a necessity of Cloathing, and cloathing with Skins of Beasts began now to be left off; the *Roman* having shew'd the World a more polite way of drefs; so Manufacture was the Daughter of Necessity, and Trade was the Child of Manufacture, as Navigation was the Offspring of Trade: The Genealogy is short and plain.

NECESSITY begat Manufacture, Manufacture begat Trade, and Trade begat Navigation. Let us then take the *Flemings* as they really were, the first Merchants in this part of the World, which Merchandizing began by their sending their Manufactures abroad to purchase with them necessary things for the carrying these very Manufactures. On this Merchandize necessarily imployed Ships and Sailors to fetch Wooll from *England*, Oil from *France*; also Fullers Earth, and many other Materials from *England*; and thus Trade grew up here.

IT may be wonder'd at, and indeed it is the admiration of the Age, and has been of the World, that *England*, who alone was the only Fountain, from whence the Wooll, which was, as I may call it, the Blood of the Manufacture, flowed, shou'd for so many Ages sit still, see their Neighbours grow rich, and powerful, and opulent, by their Industry and Application, and should supinely dream over it, sell the Wooll away to *Flanders*, to *Antwerp*, and to *Sluice*, which were in their turn the Staples for our Wooll, and see their own Women and Children idle and starving, the Poor out of Business, without Employment, flocking over to those Countries, and peopling their Towns, becoming Foreigners like themselves, and
never

never so much as try whether they could not manufacture their own Wooll, and not send abroad for Cloaths to wear, after those People had sent home to us for the Wooll to make them.

NOR is the ignorance and sottishness of this so wonderful, as that it should continue for so many Ages, and till within so little a while ago as the Reign of *Henry VII.* (*viz.*) in the fifteenth Century: That wise Prince was the first that look'd into the reasonableness of this Case: He saw the shameful Indolence of the Nation; and how his Neighbours grew rich by that very Manufacture, the want of which made his Subjects poor. He had liv'd abroad in Exile, and been in the Court of the Earl of *Flanders*: There he had seen the Opulence of the Court, the Industry of the People, and the Wealth of the Cities and Towns rais'd by that Industry; and in the mean time the solid Principles of the whole Trade to be found only in *England*, and no where else in the whole World; and this wrought in the Mind of that avaritious tho' politic Prince, and he presently saw when he came to the Crown, that it was his business no more to let this source of Wealth flow into the Coffers of his Neighbours, but to set his own People to Work to manufacture the Wooll at home; by which, (as he said to his Mother the Countess of *Richmond*) he shou'd not only keep the Money at home, but bring Money from all parts of the World to his own Country to buy the Manufacture here, as they did before in *Flanders*; and the event soon answer'd his End, and shewed the prudence of the Design, as we shall see in its place.

BUT to go back to this Affair of the prodigious extent of the Woollen Manufacture in *Flanders*; for People who have not read the Histories of their own Country, will hardly believe it possible,

fible, that *England* could ever be so blind, or be so ridden upon by their *Dutch* Neighbours, as to send their Wooll over to be manufactured abroad, or that if it was so, that they should continue in such a state of Indolence so long.

I SAY, lest it should be doubted, I shall only single out a *Flaming* Instance of it, in the time of one of the greatest and most glorious of our Kings, namely, *Edward III.* whose Reign is famous for its Splendor, and for the Honour of the *English* Nation, who erected the Order of the Garter; whose Court was all Magnificence, Feasting, and Tournament for the Knights, Balls and Masquerades for the Ladies; at one of which, a famous *English* Lady, in her dancing, dropt her Garter, and which the King saw and took up; from which ridiculous piece of Wantonness the Right Noble Order of the Garter took its Original or Device; yet even in this Kings Reign the Wooll of *England* was sold to the *Flemings*, to be manufactured abroad; for proof of which, to give one Instance for all the rest, and that I may not tire the Reader with so shameful and unpleasant a Story, I refer him to Mr. *Rymer's Fædera*, or *Acta Publica*, where he will find, that in the Year 1338 the Laitie granted to the King the one half of their Woolls throughout the whole Realm, for one Year, namely, for the next Summers Sheering; So that the King sent out his Collectors, who took the half of every Man's Wooll for the King; and of the Clergy the King took all their Wooll; so that of the Abbey of *Leicester* only the King took eighteen Sacks of Wooll, each Sack worth forty Pounds, that is to say in *Flanders*, where it seems it sold to very good profit; for in *England* the Wooll, then sold for, or was rated at, but two Shillings per Stone, each Stone weighing

ing fourteen Pounds Weight: This was in the same Year 1338.

Now the same account says, that the King sent the Earls of *Northampton* and *Suffolk* into *Flanders*, with ten thousand Sacks of Wooll, who sold the same in *Brabant* for four hundred thousand Pounds Sterling, which is no less than forty Pounds per Pack, and which was an immense Sum in those Days.

FARTHER, we find in the next Reign to this, that the Parliament granted to the King a Tax of fifty Shillings upon every Sack of Wooll exported by our own People, and three Pounds per Sack for Wooll exported by Strangers.

THESE things are to my present purpose two ways; *First*, They shew eminently to what a great height of improvement the Manufacture was already brought in *Flanders*, and *Brabant*, and *Hainault*, that is to say all over the *Low-Countries*, in the thirteenth and fourteenth Century; and what a prodigious Consumption of Wooll was made in those Countries, that they could buy ten thousand Sacks of Wooll of the King at one Season, and pay such a prodigious price for it, at that time too.

AND *Secondly*, It is a record against us, to show the stupidity of this Nation, who to so late a time as this, and above 100 Years after it, continued to let their Wooll be carry'd out of the Land, and be manufactured abroad, to the infinite profit and encouragement of the *Flemings*; when our own People here sat begging and starving for want of Work, and for 100 Years together follow'd the Priests and Priest-ridden Princes, *ala Santa Terra*, to find Graves in the *Arabian* Desarts among the *Turks*, and all for want of Business at home.

KING Henry VII. a Prince of superior Genius for matters of Improvement to all that went before

fore him, was the first that saw the folly of all this, and that open'd the Nations Eyes to see into it also: And this he did first, by inviting over several *Flemings*, who were Master Manufacturers, as we now call them, and who were thorowly skill'd in the managing, ordering, and directing the Wooll, to prepare it for working; These began with teaching our Poor in the first place to *Spin*; upon which it soon appear'd that we could both make the Yarn as good, and much cheaper than the *Flemings*; so that in a little time, instead of Wooll, the *Flemings* came over hither, and bought Yarn ready Spun, just as we buy Yarn now from *Ireland*; for the Case in *Flanders* was then, just as the Case of *England* is now, the poor by a flush of Trade and constant Work were grown rich and saucy; they wou'd work indeed when they pleas'd, but they wou'd have their own price, and work how, and when, and how much they pleas'd, just as ours do at this Day; For,

The Poor of every Nation are the same.

WHEREAS our Poor, that is to say the *English* Poor, were really indigent, very poor; poor and needy, glad to get any thing, and willing to do a great deal of Work for a little Money; so that when they began to fall into the Spinning, they not only did it well and handily, so as very soon to out-do their Teachers, but they wrought so cheap, and at so very low a price, that for some Years afterwards the quantity of Wooll that went abroad, was much diminish'd, and the *English* Yarn grew a valuable Merchandize in *Flanders*, and much more esteem'd than their own; at the same time the Dealers in it found the benefit by buying it so cheap in *England*; so that the Yarn

Buyers and Wooll Combers in *England* grew rich, as it were on a suddain.

IN the mean time, if we may believe Tradition and Report, the *Flemings* had Wit little enough (for Nations sometimes are blind as well as Men) to take Umbrage at the great Importation of Yarn from *England*, and to make their advantage, by laying a Tax upon it, or at least to threaten the Prohibiting of it.

BUT as one Improvement generally brings on another, the King finding his People began to be acquainted with the Wooll Trade, and that the Manufacture began here and there to take footing in *England*, and being fully satisfied, that if the *Flemings* had not Wooll from *England* they could have it no where else; he resolv'd to bring them to be glad to buy their Yarn here, and give a good price for it too; and at once, strook that fatal blow that ruin'd the *Flemings* and all their Commerce, as to the Wooll itself; for he got an Act pass'd in his Parliament to prohibit carrying any more Wooll out of *England*.

THIS was a mortal blow to the *Flemings*, and made such a combustion among them, that had they been able they wou'd have declar'd War against King *Henry*, and have come over and fetch'd the Wooll away by force; but he was above that, he neither fear'd them, or the whole World, as to Invasion; so they were oblig'd to be contented, and to rumage the whole World for Wooll to carry on their Business. Now tho' they had some Wooll out of *Normandy*, some from *Spain*, some from *Scotland*, and some from *Ireland*; yet none, except the last, came up to the *English* for goodness; so that they were glad to take the *English* Yarn, which they had forbidden before, and it was but a little while that they had the liberty of the Yarn too, tho' I do not find it prohibited in
King

King *Henry's* time neither; for tho' our People began to make several sorts of Woollen Manufactures in that Prince's Time, yet they were not immediately in a condition to work up all the Wooll of the growth of the whole Nation, and so supply themselves and other Countries too, as has been the Case since: But it was a great Improvement, and a great stroke to the support of the People, that they were able to spin it into Yarn; they did perhaps manufacture a great deal of it, and especially so much as was sufficient for the supply of their own Country, and exported abroad such Yarn only as they could not work up.

THE first Counties in *England*, who fell into the Clothing, we find to be the West-Riding of *Yorkshire*, and the Eastern parts of *Lancashire*; that is to say the great Towns of *Leeds*, *Wakefield*, and *Hallifax*, in the first; and *Rochdale* and *Manchester* in the last; in all the last of which the Manufacture still remains.

THEN the Western Counties of *England*, such as *Gloucester*, and *Wilts*, and *Somerset*, where also it still remains, and particularly *Berkshire*.

BUT the Woollen Manufacture never came up to its full Maturity in *England* till the time of Queen *Elizabeth*; when by the Persecution of the Duke of *Alva* in the *Netherlands*, the *Flemings* flying from the cruelty of the *Spaniards*, settled here in *England*; as at *Norwich*, at *Ipswich*, at *Colchester*, at *Canterbury*, at *Exeter*, and in several other places, and brought over with themselves the complete knowledge of the Woollen Manufactures, and People also to work them; by which the *English*, who are justly fam'd for improving Arts rather than inventing, fell into those Manufactures, and having the best of the Wooll at their Hands, soon out-wrought the *Flemings* in every particular. Thus,

THE

THE Bays were set up at *Colchester*.

THE Says at *Sudbury*.

THE blue Cloths at *Ipswich*.

THE Womens Stuffs, and Knitting of Stockings,
at *Norwich*.

THE Serges at *Exeter* and *Taunton*.

MANY of the *Dutch* Families who brought over those Arts, and settled in these Places, have left their Names and Posterities behind them, whose Families are flourishing even in the same Places to this Day; as the *De Vink's* at *Norwich*, the *Rebow's* at *Colchester*, the *Papilon's* and *Lethulier's* at *Canterbury*, and many others, who are of known *Flemish* and *Walloon* Extraction.

NAY, the Churches of Protestants erected by them, and which Queen *Elizab.* establish'd on their account, remain to this Day, as a *Dutch* Church at *Norwich*, and a *Dutch* Church at *Colchester*, and a *Walloon* Church at *Canterbury*; all which remain there to this time.

NOR is this all, but the Manufacture of Bays at *Colchester* was in the same Reign settled by Authority, and the Manufacturers incorporated, and still retain their Privileges, and are vulgarly call'd the *Dutch Bay-Hall*; for the Bays, now call'd *Colchester* Bays, were then call'd *Dutch* Bays, that is to say, being made by *Dutchmen*, or *Flemings*, who settled there from *Antwerp*.

I THOUGHT it was best to run this part thus forward to its meridian height, tho' it brings me down farther into our own times than by the course of the other Branches I am upon; that the Reader may take it all into his Knowledge together. But Navigation was not able to keep pace, for tho' by practice and improvement the Builders of Ships were even now (suppose us speaking
of

of the Times from the eleventh to the thirteenth Century) come to some improvement; yet we find King *Edward III.* and the *French* fighting at Sea with 500 Sail of Ships on a side: And 'tis evident they had not yet the knowledge of the Loadstone to work Mathematically, or of Guns and Powder to fight Mathematically, but fought in those Ships, such as they were, by running foul of one another, and grappling together, and then come to Sword and Spears, Bows and Arrows, as on Shore: But we shall see them wiser in a few Years.

ALL this while the *East India* Trade for Spices and Callicoes, and the *Persian* Trade, for raw Silks, and wrought Silks, was carry'd on by the *Venetians*; they imported the first by the *Red Sea*, and brought them from thence by Land to *Alexandria*, and then by Sea to *Venice*, and they fetcht the raw Silk by Land from *Ispahan* to *Aleppo*, and there the *Venetian* Merchants took them, and carrying them to *Smyrna* and *Scandaroon* (just as we do now) sold them again to the *Lombards*; for much about this time we find the *Milanesse*, and after them the *French*, deeply embark'd in the Silk Manufacture, which so vastly has enrich'd them; and of which I shall speak more fully in its place.

LET us now go back and enquire a little into the growth and progress of Learning and Science in the same Years, that one may go Hand in Hand with the other.



CHAP. XVII.

Of the Progress of Learning after the downfall of the Roman Empire.

IT must be acknowledge that Learning and Philosophy flourish'd in the times of the *Roman* and *Grecian* Empires; History is full of it, the Works of *Plutarch*, *Xenophon*, *Homer*, and others, among the *Greeks*, and of *Virgil*, *Horace*, *Lucan*, *Juvenal*, *Cicero*, *Seneca*, and several others, among the *Latines*, are standing Monuments of the soundness of their Knowledge, the beauty of their Language, their Oratory, Poetry, and other Excellencies in those polite Times.

WHEN the *Roman* Empire became Christian, their Learning exerted itself another way: The primitive Christian Bishops apply'd themselves to religious Studies. The Philosophy of the Antients consisted chiefly in Moral Precepts and Laws of Virtue, wise Sentences, and Orations in praise of their Heroes, and sometimes of their Gods: The Wisdom of *Athens* consisted in the grave old Men reading Lectures of good Manners, and good Morals; and *Seneca*, that learned and really wise *Roman*, is pictur'd to us, when bleeding to Death in a warm Bath, dictating his Morals to his Scholars. To be bred thus at the Feet of *Gamaliel* was the utmost of what they call'd polite and liberal Education; for as to Languages they made no use of them. When *Strabo* and *Plutarch* wrote, the World spoke *Greek*; to write in *Greek* at that time was to write to all Mankind. When *Se-*

nec

neca wrote; and *Cicero* pleaded, *Latin* was the universal Character, all the *Roman* World, which in short was it, all the known World spoke then, and as a late Poem well expresses it, they spoke and wrote in their Mother Tongue.

YET the *Romans* excell'd in every thing which was then call'd Learning; their Orators spoke excellently well, and charm'd the Souls of those they spoke to: *Ciceronian Latin* is a proverbial Expression to this Day, intimating how nobly *Cicero* spoke, and that the *Latin* Tongue was in its utmost perfection in his time, and he a compleat Master of it.

ALL this was under the *Græcian* and *Roman* Governments when really Pagan: But was Learning lost by the introduction of Religion? No, just the contrary; *Origen* taught Philosophy in the public School at *Antioch*; and *Cyprian* read Divinity and Philosophy also to his Pupils at *Carthage*: They not only abounded in Wisdom and Piety, but in Knowledge and Learning: After those Times, upon the declining of the *Roman* Empire, when Learning began to decay, the *Latin* Tongue was corrupted and lost, and that which once all the World spoke was sunk out of the World, only as it was to be found in the Writings of the Antients; hence it became necessary, that all those that would read the Writings of the Fathers, must be able to speak the *Latin* Tongue in its Purity.

THIS sent all the young Students to School; for the *Latin* was no where found with purity and clearness, but in the Books written by the Antients, such as those we now call the *Classicks*. Thus it was likewise with the *Jews*, as to the *Hebrew*; for the Children of *Israel*, or of *Judah* rather, being seventy Years in Captivity in *Babylon*, they forgot their Country so much, that

they forgot their original *Hebrew*, and all spoke the *Chaldee*, the Speech of the *Babylonians*, and so afterwards the *Greek*; the antient *Hebrew* was only to be found in the *Talmud*, and in the Writings of their *Rabbies*, whence it was call'd *Rabbinical Hebrew*; and those who afterwards desir'd to speak or read *Hebrew*, were sent to the Schools of their Doctors and Rabbies to learn it.

HENCE the knowledge of the Tongues, as of the *Latin*, *Greek*, and *Hebrew*, is call'd Learning, and he that understands, or is Master of those Tongues is call'd a Man of Learning; and in our Days if a Man understands all the other Languages spoken in *Europe*, if he is Master of Science, and understands Astronomy, Geography, and all the other Branches of the Mathematicks; if he had read all the Civil, or Ecclesiastic, Sacred, or Prophane History, were an exquisite Engineer, or a compleat Navigator, yet if he has not the *Greek* and *Latin*, he is no Scholar; which by the way is a gross Error in the common Judgment.

HAVING thus mention'd the Learning of those Times, I come next to examine the Theory of Philosophy in all that time receiv'd in the World, all the knowledge of the motions of the heavenly Bodies, their Magnitude, Distances, Influences, begun among the *Chaldeans* and *Persians*, carry'd on and encreased among the Eastern *Arabians*, and consummate and compleat among the South; from whence it launch'd out into *Egypt*, and thence into all parts of the then known World; I say *Egypt* was the center of all Knowledge and Learning of that kind for many Ages, and the first System of Astronomy was read in their Schools, which was according to *Ptolemey*, and therefore call'd the *Ptolemaick* System.

IN the infant state of the World this was a great point, and Men thought themselves great proficient

proficients in Learning that could explain things by the Doctrine of *Ptolemy*; when all on a sudden, from the remotest Angle of *Europe*, a Thousand or fifteen Hundred Miles from the City of *Rome*, up starts an obscure *Polander*, *Nicholas Copernicus* by name, a mean Priest in the *Romish Church*; and he examining the former *System*, reflects presently that a better way, and nigher by far, to the true *System* was known to them, and might be reduced into practice.

COPERNICUS was accordingly, and at the first appearance of his Scheme, accepted and receiv'd, and made his Knowledge extensive to the whole World.

THIS Copernicus studied the thing effectually, and brought it to this perfection; that he rejected the whole *Ptolemaic System*, gave a new Scheme of the heavenly Bodies, their Motions and Distances, and gave such Demonstrations of what he said, and especially so easily solv'd several Difficulties and Inconsistencies, which were at least not solvable by the old *System*, that, in a word, the whole World are now come with him to reject the old *Ptolemaic System* and embrace the *New Philosophy*.

IT was indeed at first ridiculed and laugh'd at; Men could not so soon come off from the notion of the rising and setting of the Sun, which had been almost 4000 Years the received Opinion of the whole Earth, nay, was even read in the style of the Scripture; nor could they entertain any thought of the Earth rolling on upon the Poles of the *Ecliptic*, with the surprizing velocity of 21000 Miles in twenty four Hours; and yet we who live upon the Surface of it be no way sensible of its moving, much less disturb'd with it;

I say, it was look'd upon as absur'd; and we find this homely Distich upon record against it;

*Copernicus this new wild Fiction found,
To make the Sun stand still, and the World go round.*

BUT however they receiv'd it, the force of its Reasoning prevail'd, and in a few Ages the whole World came into it; thus the *Ptolemaic System* was rejected as impracticable and absurd; and this has been the receiv'd Philosophy ever since.

THIS *Copernicus* was born in the City of *Thorn* in the *Polish Prussia*, a City on the *Vistula*, and the first that has a Bridge over it from the Sea to that place; he was a Divine, and a Physician, as well as a Philosopher; for he was a Canon of the Cathedral Church at *Warmia* in *Prussia*; but principally delighted with the study of the heavenly Bodies, he travel'd to *Italy*, and at *Rome* set up his new Philosophy, and taught it in a kind of Mathematic Accademy, where he soon got many Followers: He was born in the Year 1473; his Hypothesis was said to be first fram'd by an antient *Greek* Astronomer *Aristarchus*; and that *Copernicus* only reviv'd it; but it is evident if he did so, he much improv'd it also, and therefore it deservedly bears his Name: His Doctrine of the heavenly Bodies is as follows.

COPERNICUS makes the Sun the center of the Universe, and holds 'tis immoveable. *Mercury*, the next Planet to the Sun, compleats its Circle about it in three Months. *Venus* runs her Circle, which environs that of *Mercury*, in seven Months and a half; the Earth hers in a Circle that comprehends that of *Venus*, in a Year, but has another motion upon or round its own Axis, which is diurnal of twenty four Hours, and is that by which we explain the succession of Days and Nights.

Nights. The *Moon* rolls about the Earth, and compleats hers in twenty seven Days, or thereabouts. *Mars* in a fourth Circle comes round that of the Earth, and has the Sun for the Center, the time of its Revolution being about two Years. *Jupiter* in about twelve Years. *Saturn*, the highest of all the Planets, makes its turn about the Sun in thirty Years, or thereabouts. Above *Saturn* *Copernicus* places the Starry Heaven, (which is motionless in his Opinion. [To resume his Sentiments of the rest] the Sun is immoveable, and in the Center of the World. *Mercury*, *Venus*, the *Earth*, *Mars*, *Jupiter*, and *Saturn*, move in their six Circles round the Sun: But the Earth has another Motion on its own Axis, and the Moon makes its circuit round the Earth. By this System we avoid the difficulty of explaining and giving Reasons for the daily motion of the Sun in an immense space, and with an unconceivable rapidity. But tho' *Copernicus* places the Sun in the center of the World, and allows it no motion, so as not to change one place for another; yet his Followers give it a circular Motion round its Axis, and say this Revolution is compleated in twenty seven Days: This they do to explain the appearances of Stains or Spots that have been discovered by Telescopes or Perspective-Glasses in its Body, but are observed to change their Situation in twenty seven Days. As for the Earth *Copernicus* gives it three Motions: *The first*, That it compleats in a Day; *The second*, The Yearly; And *the third*, Which always keeps the Earth's Axis in the same Position. The *Diurnal* Revolution is, that which the Earth makes in twenty four Hours upon its own Axis; so that the part that is towards the Sun is always enlighten'd, whilst the other lies dark. The *Annual* is, that the Earth runs through the Signs of the *Zodiack*, when between

tween *Venus* and *Mars* it take its round about the Sun in a Years time: The third serves to give Reason for the difference of Seasons, and the inequality of Days in different Climates.

It is true that several Learned Men had made Essays of this kind; the *Primum Mobile* of *Ptolemy* confounded them, it was impossible to conceive regularly of them, or to bring any Demonstrations of the Fact that were consistent; they were forced to resolve all difficulties of things into Omnipotence; Telescopes, and more perfect Glasses than had been then found, discover'd things formerly unknown; as particularly the motion of the Sun round its own Axis in twenty seven Days, by seeing the Spots and Marks discover'd in the Body of the Sun change their situation, and come into the same place every twenty seventh Day; discovering the Satellites or Moons about the Planets, and their Revolutions and Eclipses; the Winds, Tides, and several other Phenomenas, of which the Antients had little or no knowledge, or at least could not solve the Difficulties that arose from them.

This has been the ground plat of vast Improvement in Science, which we may take occasion to mention hereafter in this History, and particularly of the famous *Tycho Brahe*, the King of *Denmark's* Astronomer Royal, who form'd a third System different from both these; But Death taking him off before he had brought it to perfection, the World, tho' they honour him as a great Man, yet have not receiv'd his System, or improv'd upon it. But *Copernicus* has employ'd all the Learned Men for now 200 Years to go on improving upon his System, and these having remov'd all possible Objections that were then, or have since been rais'd; this is now the receiv'd Philosophy, upon the foot of which, all the fine Experiments

Experiments of the present and last Age have been rais'd.

FROM hence I must pass to another perfectly new Invention or Improvement, which the World owes to the same Northern Climate, tho' not the same Country as the other; namely, the Art of Printing. The other indeed is an exalted Science, but this may bear as just a Preheminence in Arts, and among the modern Improvements of Art, as that does in Science: This was the Invention of one *Koster* at *Harlem*, where certainly the first Experiment that was in the World, was made. It is true that *Guttemburgh* and *Faustus*, both of them Servants to this *Koster* the first Inventor, went from him, and spread the Invention, the one to the City of *Ments* in *Germany*, and the other to *Paris*; and there practising it as their own, gain'd for some time the name of being the first Inventors, and *Ments* contends the point with *Harlem* to this Day; as for *Faustus* he own'd himself afterwards not to be the Inventor; to which there hangs a Tale which few People perhaps have heard, and therefore may be acceptable to the Reader, since so much noise has been made of this suprizing Fellow in the World.

ALL Books being before only Manuscripts on Rolls of Parchments, Vellum, &c. and consequently both scarce and dear, and *Faustus* having printed a large Impression of the Psalter, with some Books of the New Testament, goes away with them to *Paris*, to sell them there as Manuscripts; and accordingly sold several of them, and had an extraordinary price for them as such: But some Learned Men of the Faculty, at *Paris* viewing these Psalters with some admiration, were surpriz'd to observe that there was an unaccountable uniformity in the Performance.

THEY

THEY observ'd that every Line was exactly of the same length, every Word stood exactly in the same place; if any Letter was made after a particular manner, the same Letter in the same Leaf and Page in all the Books was exactly perform'd in the same manner; nay, if there was a blot, or a fault, or a mistake, it was every where the same; and this brought them to question at first soberly with *Faustus* about it; he alledg'd it was the effect of the exactness and dexterity of his Writers, imitating every thing exactly; but they were far from being satisfied with this Answer of his, and told him it was impossible.

At length *Faustus* defending himself but indifferently, they concluded *Faustus* had practis'd some Magic Art to perform this thing in so wonderful a manner, and then began a Process of Witchcraft against him, alledging, that he dealt with the *Devil*, resolving to put him to Death; *Faustus* defended himself a long time, and a great noise it made in the World, the Books were seiz'd, and People came far and near to see Books written by a Conjuror, and by the help of the *Devil*, especially God's Word too.

IN a word, they carry'd it so far that they would certainly have hang'd poor *Faustus* for a Necromancer and a Witch; so he was forced to confess how it was, and in short to show them his Art, and how to perform it. This was the whole Story of the famous Dr. *Faustus*, of which so many Books and Ballads, Tales and Harlequins have been made, and such merry doings been seen here within these two Years among us.

THIS is the beginning of the use of Letters or Types for impressing or stamping the Words to be written in a Book or Roll, and which with great ease and facility is rendered practicable to the Printer.

WITH

WITH the invention of Printing came on the invention of Paper also. It had been used before, but as it was but a few Years it met with great encouragement upon the spreading of the Art of Printing: It began at *Basil* on the Frontiers of *Switzerland*, was invented there, or brought thither by two *Greeks*, and was there made first in great plenty, till at last they suffer'd other Towns to see them do it also; and so the Manufacture went from them to other places in *Germany*, and so by degrees to *Genoa* in *Italy*, to *France*, and to *Holland*, and is now made in all the Nations of *Europe*, and in *Asia* also.

IT is to be observ'd, that at the same time that these things were doing, the World seem'd to rouse up to a state of Industry and Application, from a state of the greatest Indolence and Ignorance.

THE truth is, till now the Industry of the World had nothing to work upon; the lovers of Art had nothing but mere Nature to teach them; *Copernicus* himself knew nothing of the true Distances and Magnitudes of the Planets, which by the help of our Telescopes (an Invention of so truly strange a nature) we are since arriv'd to: The Diameter of the Sun, the Ring and Satellites about *Saturn*, the whole Solar System, were all out of his reach; in short, tho' he made a right guess, and considering the Circumstances it was a wonderful guess too; yet all was in the dark, and the demonstrations of things are generally Modern.

EUCCLID and his Elements are all modern; *Archimedes* was dead, and Mathematic Knowledge seem'd to have dyed with him.

BUT still the World was fir'd with a desire of knowing; Astronomy was a delightful Study. *Copernicus* no sooner set up his Astronomical Lectures at *Rome*, but all the *Virtuosi* of that Age flockt to him, till (if you will believe some People)

he taught them to be Wiser than himself, and they improv'd upon his Schemes in many valuable particulars, and from which we see his Schemes are much improv'd; nor was it only this Knowledge which Men began to look into, but in the next Ages all the noble Inventions in Art, which have justly been work'd upon since that, and so much improv'd, have started into the World; such as Geopraphy, Arithmetic, Improvements, of which the Branches are full of Variety, and the mathematical Addendus, of which they are infinite.

THUS to look back a little between the Years 1400 and 1600 almost all the great and most illustrious Improvements in the sublimest parts of Knowledge, have been found out, or at least extended in these parts of the World. We are told indeed, that almost all our nicest Discoveries were found out, and in practice in *China* before they were discover'd here: This I believe nothing of, and give less credit to what they talk of having several Arts which we have not. It is true their Japanning, or Lacquer, cannot be imitated, nor their China Ware, but it is want of the Materials, not want of the Skill or Knowledge how to perform the Operation; or 'tis want of Climate for the sudden drying and hardning their Lacquer, and so of other things.

As Printing was invented by *Koster* in 1423, or 1430, Rag Paper in 1452, so Graving, and Printing by the Rolling Press was brought on in 1460, and Etching a few Years after in like manner: By the like degrees Gunpowder was the Invention of the same Century, and Guns follow'd it close at the Heels; it was impossible that Powder could be known, and the force of it, and Nature not direct Men to fight with it.

AND

AND here it is worth Observation; Why did not Providence permit the first Invention of Powder to be so appropriated to one particular Prince or Nation, that they might have conceal'd the Art of making it, or the Ingredients and Materials used in the making, or the corning and operation of it, or the Apparatus necessary for the purpose, so that by this means that Prince might have conquer'd all the rest of the World; for 'tis evident nothing could have stood against it, or have withstood the Army that shou'd have had the use of it exclusive of their Enemy; but either we are entirely out in the History of it, or the discovery was immediately made so public, and improv'd in so many hands, that it appear'd in the Field in several places almost at the same time; no particular Prince or Power having any extraordinary advantage by it, at least not that I find recorded.

I MAKE no doubt, but that, when it came abroad in the World, and that it was thus particularly applicable to the use of the War, all the neighbouring Powers took care to be acquainted with the Secret, and to be furnish'd with the Species; for we do not find that it was to be had in any one particular place more than another, but that it was (as it is now) made every where, the Composition being presently known, and the Materials easy to be procur'd: So true is it, that the Ingredients for a public Mischief were easy to be had, and it seems the Monk, who made the Discovery, was not at all cautious in keeping the Secret, but it took Wind presently.

NOR is it certain whether great Cannon, or smaller Pieces, were the first that were invented; if I may speak my Thoughts, it was the former, seeing we find that the smallest Gun used in fight for some time was the Harquebuss, and at first a larger sort, which they call'd Harquebuss *au croc*,

because it stood upon an Iron Frame call'd *a-Croc*, and fasten'd with a kind of Swivel, or Scrue, to the said Frame, being itself heavy and unwieldy, and too big for one Man to manage.

AFTER this they were made smaller, but yet too heavy for Soldiers to carry and to march with, and were carry'd on Horse-back, and the Harquebusiers, like Dragoons, when they came to fight, laid them cross the Saddle, and so fir'd them at the Enemy, standing themselves on foot by: After this they carryed Rests for them, and that continued a long time, nay, it is within the Memory of Man, that all the Musqueteers in the Armies had Rests for their Musquets, and all the Field Exercise and Words of Command were accordingly. Whether the Musquets they us'd at that time were larger and heavier than those now in use, I know not, but I believe they were not much larger, if any thing, but it was pretended the Soldiers took the surer aim.

UPON all this, I am of opinion that the first use of Gunpowder, that is to say in the Field, was in the Artillery, and the Reason which at least guides me to this, is, that tho' they might have the use of the Gun, yet they had not of the Lock to fire it with; and it is but a very few Years (and since the Writer of this can remember) that the Firelock was not known; or if it was, it was but rarely us'd, but all the Soldiers were encumber'd with Match, which had innumerable leisurly slow Inconveniences, attending it, as particularly blowing the Match, cocking the Match, trying the length, then opening the Snaphaunce, as the *Dutch* call'd it, much more properly call'd now the Pan, and besides this the Soldiers had an intolerable difficulty to keep their Match lighted, and sometimes in short after Rains, or wet misty Nights, it has been impossible the Armies cou'd
engage

engage, tho' resolv'd before to come to a Battle; and if one Side had been more careful to keep their Matches lighted, and came on, knowing themselves in good Condition, that way, the other Side have been oblig'd to retreat and shun the Fight.

NAY, so general was the use of what we call'd Match-locks to the Musquets, that since we very well remember, and very modern in History, we find, that when honourable Conditions were given to a Garrison, who capitulated to march out in a soldierly Condition, it was always thus express'd, (*viz.*) Drums beating, Colours flying, Match lighted, Bullet in the Mouth, &c. But now the Firelock, which is the most modern Invention of all, is so universal, that instead of those Words in Capitulations, it is now only mention'd, that the Men shall have so many Charges of Powder and Ball.

I AM told by some, that the Improvements in the Art of War are such, and so considerable, that no other Improvement can come up to them; also that these Improvements ought to take a Place in the Discourse I am upon, and I grant it; but then I think the proper *Ephocha* to begin our Discourse upon warlike Improvements, shou'd begin at the Introduction of Guns and Gunpowder; for as to what was before, it is not worth notice. The *Romans* embattling in Lines and deep Bodies, the *Macedonian* Phalanx, and other the antient Methods of drawing up Armies, as also the *English* ranging their Archers and long Bows, all these wou'd require long Descriptions, but little to our Instruction: But Powder and Ball, at once put a new Face, not upon the Armies only, but upon the very War; Fire and Noise were added to the Terrors of the Field, things which the Soldier had never been acquainted with before.

FIGHTING

FIGHTING was now become a strange new Thing; When Battles were fought and Armies engag'd, they might be heard at the distance of many Miles; whereas before that, the loudest Cries and Shouts of the Troops reach'd but a small way off; But there was something stranger yet; before this Men march'd up to Battle cas'd in Steel, and made up in Greaves and Helmets, that nothing could be seen but the burnish'd Iron; nor could you come at the the Man when you were within an Inch of his Face; but now, they began to quit their retreat behind their Iron Walls, and shew the true Courage and Gallantry of a Soldier; and tho' the Bullet was much more fatal, and the Gun had much more terror in it than the Arrow, or the Bow, yet despising Danger and scorning Armour, the Soldier now looks Death in the Face, and boldly rushes on, even in the Mouth of the Cannon and Musquet.

IT is much disputed in the World, whether Fighting is more or less Terrible, and Battles more or less Bloody, since the discovery of Powder and the use of Guns than before; some think Men rushing forward into Danger, and pushing up to the Teeth of their Enemy, they bring Things to a shorter issue now than before; formerly the Infantry endur'd Showers of Arrows for many Hours sometimes, before they could come to Swords points with their Enemies, so that they often came up wounded and out of Breath to the Fight, and left thousands of their own Side behind them dead or disabled, before the Battle could be said to be join'd; whereas now, with Fire and Thunder the Spirits of Men are immediately agitated into Fury, and they run on like enrag'd Lions, so that one Side or other must fly, or be cut in pieces very quickly. But this is not my business to enquire here, I may have occasion to speak of it again

again when I come to discourse of the several Improvements which have since been made subsequent to, and occasion'd by this fatal Invention; Such as,

I. THE modern Improvements of Fortifications for Encampments of Armies, and the strengthening of Towns and Fortresses, quite differing from such as were known before.

II. THE manner of approachings and attacks in Sieges and Stormings, with the numberless Improvements of the Engines of Battery, also Sapings and Counterminings, all different both in attacking and defending of strong Towns, from what were of use before.

III. THE *Tormentarij*, or Artillery of several kinds, besides the mere Invention of Cannon; such as *Mortars*, *Patereroes*, *Hawitzers*, *Chambers*, *Bombs*, *Carkasses*, *Stinkpots*, *Hand Grenades*, *cum multis alijs*, all perfectly new; and not possible to be otherwise.

THESE Things leading us gradually to more modern Improvements, we must adjourn them for a while, in order to bring Things more Antient up to an even Line of Time with them; and particularly to speak of the Discovery of unknown Countries, as well for Conquest as for Commerce; for it is to be observ'd, that in this same Century the knowledge of Navigation encreasing, Mens Minds were fir'd with the desire of knowing as well unknown Countries as unknown Arts; and we find the *Portuguese* and the *Genoese* pushing into new and undiscover'd Parts of the World, and after them the *Spaniards* and the *Dutch*, and as it were last of all, and out of time,
the

the English and French; whose useful Discoveries however, have by their extraordinary Application been successfully encreas'd to a Magnitude in some degrees equal, if not superior to them all, as we shall fully make out in its place.

THE knowledge of the Magnet or Loadstone, and in Consequence of it, the Compass were among the Improvements of the fifteenth Century, the History of them I reserve for its proper place; the use I make of it here, and for which I mention it, is this, namely, that by this great and happy Discovery Mankind was infinitely encreas'd in Knowledge; and which was as much as all the rest, they were inspir'd with a desire after knowing more.

TILL then, *like Solomon's Fool*, they seem'd to have no delight in understanding that they seem'd to know but little but to be satisfied in their state of Ignorance, and not desire or at least not to search after an encrease of Knowledge, perhaps they believ'd, or at least fancy'd they could know no more than they did.

BUT now having open'd a Door into the vast Ocean of Mathematical Knowledge, it fir'd their Souls with a happy desire of knowing more; I say fir'd, because Mankind has ever since had an unquenchible Thirst after the compleat Discovery of Nature, and the highest degree of acquir'd Knowledge, and an indefatigable Application to farther and farther Improvements in Arts and Science; in a word, in all possible Degrees of Learning and Knowledge.

WHAT happy Success they have had, and what Progress they have made, we shall see something of in the following Chapters.

A GENERAL
HISTORY
OF
DISCOVERIES
AND
IMPROVEMENTS,

In useful ARTS,

Particularly in the great Branches of
COMMERCE, NAVIGATION, and
PLANTATION, in all Parts of the
known WORLD.

A Work which may entertain the CURIOUS with
the view of their present State; prompt the In-
dolent to retrieve those Inventions that are neg-
lected, and animate the Diligent to advance and
perfect what may be thought wanting.

The Fourth and Last PART, with a compleat
INDEX to the Whole.

L O N D O N:

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Shilling each.

History of

the County of

Essex

from the earliest times

to the present

by

John

Barrow

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CHAP. XVIII.

Of the negative Condition of the World, as to Improvements, either in Arts, Science, or Commerce, till the thirteenth Century; and what ignorant Doings there were among the wisest and most knowing part of Mankind for want of the several Improvements made since that time, with a summary Account how those Improvements began.

AS I have noted already, the World about the twelfth Century was in but a poor Condition, as to *Trade or Navigation*; nor indeed were they much better in all matters of useful Knowledge; Mankind seem'd to be in general, stor'd with no other Knowledge than Nature and Necessity immediately dictated. In short it was a *Green-headed Age*, every useful improving Thing was hid from them; they had neither look'd into Heaven or Earth, Sea or Land, as we see has been done since; they were confin'd and narrow'd in their Understandings, as they were in their Dwellings; they might be said not to know above a quarter part of the Globe, and not to understand a quarter part of that they knew; let us look a little into the particulars.

THEY had *Philosophy* without Experiment.

MATHEMATICKS without Instruments.

H h

GEOGRAPHY

GEOGRAPHY without Scale.

ASTRONOMY without Demonstration.

THEY made War without Powder or Shot, Cannon or Mortars; nay, the very Mob made their Bonfires without Squibs or Crackers.

THEY went to Sea without Compass, and sailed without the Needle.

THEY view'd the Stars without Telescopes, and measured Latitudes without Observation.

LEARNING had no Printing Press, Writing no Paper, and Paper no Ink; the Lover was forced to send his Mistress a Deal Board for a Love Letter, and even a *Billet Doux* might be about the size of an ordinary Trencher.

THEY were cloath'd without Manufacture, and their richest Robes were the Skins of the wildest and most formidable Monsters.

THEY carry'd on Trade without Books, and Correspondence without Posts; their Merchants kept no Accompts, their Shopkeepers no Cash Books.

THEY had Chirurgery without Anatomy, and Physicians without the *Materia Medica*.

THEY gave *Emeticks* without *Hypocacuan*, drew *Blisters* without *Cantharides*, and cur'd *Agues* without the *Bark*.

As for Geographic Discoveries they had neither seen the *North-Cape*, or the *Cape of Good-Hope*,
South,

South. All the discover'd inhabited World, and which they knew and convers'd with, was prescrib'd within very narrow Limits; that is to say, *France, Britain, Spain, Italy, Germany, and Greece*, the Lesser *Asia*, the West parts of *Persia, Arabia*, the North parts of *Africa*, and the Islands of the *Mediterranean Sea*; and this was the whole World to them.

Not that any of these Countries were fully known neither, and several Parts of them not enquir'd into at all: *For Example*,

Ireland, Norway, Denmark. We have Reason to believe these Countries had never been so much as peep'd into by the *Romans*; nor for some Ages were they any otherwise known, than as the *Danes* made themselves known by their Barbarities and Piracies, and the *Irish* by their Stupidity.

GERMANY was known so far as the Banks of the *Elbe*, but very little beyond; *Poland* not beyond the *Vistula*, or *Hungary* beyond the *Danube*.

MUSCOVY or *Russia* perfectly unknown as much as *China* beyond it; and *India* also, only by a small Commerce upon the Coast; chiefly about *Suratte*, and the Coast of *Malabar*.

AFRICA had been more known, but (as has been said) by the ruin of the *Carthaginians*, all the Western Coast of it was sunk out of Knowledge again, and forgotten; the Northern Part, that is to say the Coast of *Africa* in the *Mediterranean* remain'd in Knowledge, and that was all; for the *Saracens* over-running the Nations

which were planted there, ruin'd all the Commerce, as well as the Religion of it.

THE *Baltick* Sea was not discover'd, or the Navigation of it known; for the *Teutones* or *Teutonic Knights* came not there till the thirteenth Century; so that Navigation was in its Swadling Cloaths, or truly in a state of *Infancy*; for as all the Naval Stores on this side of the World came from the Coasts of *Pomeran*, *Prussia*, and *Livonia*; little was done, or could be done, in building or fitting out Ships, till they began to furnish the Materials; except what the *Venetians* did in the *Adriatic* Gulph, who had their Naval Stores another way.

THUS far as to the Countries which might be said to be known, or half known; for no part of them could be said to be fully known, but *Italy*, and the Islands adjoining, except the Kingdom of *France*, and the antient *Greece*.

As to modern Discoveries, how defective were those Ages, and to how narrow a compass were they confined?

AMERICA was not heard of, nor so much as a Suggestion in the Minds of Men that any part of the World lay that way.

THE Coasts of *Greenland*, or *Spitsbergen*, as the *Dutch* call it, and the Whale Fishing, was not known; the best Navigators in the World, at that time, wou'd have fled from a Whale, with much more fright and horror, than they would have done from the Devil, in the most terrible Shapes that he ever had then appear'd in.

THE Coasts of *Angola*, *Congo*, the Gold and the Grain Coasts, on the West-side of *Africa*, from fifteen Degrees North to twenty five Degrees South of the Line; from whence since that time such
immense

immense Wealth has been drawn, was not discover'd, or the least enquiry made after them. ¶

ALL the *East-India* and *China* Trade, tho' a Mine of Gold, was not only undiscover'd, but out of the reach of all Expectation. Coffee and Tea, those modern Blessings of Mankind, were never heard of; the *Indian* Ocean had never been sail'd in, other than by the coasting Barks of the *Red Sea*, and of the *Persian Gulph*, which were but small and few; all the unbounded Ocean we now call the *South Sea* was hid and unknown; all the *Atlantick* Ocean, beyond the Mouth of the *Straights*, was frightful and terrible in the distant prospect of it; nor durst any one peep into it, otherwise than as they might run a long the Coast of *Africa*, towards *Sallee* or *Santa Cruz*.

THE *North Seas* were hid in a Veil of impenetrable Winter Darknes; The *White Sea*, or *Arch-Angel*, was a very modern Discovery, not found out, till Sir *Hugh Willoughby* doubled the *North Kyn*, and paid dear for the Discovery, being frozen to Death, with all his Crew, on the Coasts of *Lapland*; while his Companion's Ship, with the famous Mr. *Chancellor*, went on to the Gulph of *Russia*, call'd the *White Sea*, where no Christian Nation had ever been before him.

IN these narrow Circumstances stood the frame of the World's Knowledge at the beginning of the fifteenth Century, and when Men of Genius began to look abroad, and about 'em. Now, as it was wonderful to see a World so full of People, and People so capable of Improvement, be yet so Stupid and so blind, so ignorant, and so perfectly unimprov'd; so it was as wonderful to see with what a general Alacrity they took the Alarm almost all together, preparing themselves as it were on a sudden, or by a general Possession or rather Inspiration to spread Knowledge through the Earth, and

and to search into every thing that it was possible to know.

How surprizing is it for us to look back so little away behind us, and see, that even in less than two hundred Years all this (now so Self-wise) part of the World did not so much as know whether there was any such Place as a *Russia*, a *Muscovy*, a *China*, a *Guinea*, a *Greenland*, or a *North-Cape*? that as to *America*, it was never suppos'd there was any such Place, neither had the World, tho' they stood upon the Shoulders of 4000 Years Experience, the least thought, so much as that there was any Land that way.

As they were ignorant of Places, so of Things also. How vast are the Improvements of Science, that all our Knowledge, either of Mathematicks or of Nature, or of the brightest part of human Wisdom have their Admission among us in these two last Centuries?

WHAT was the World before? And to what were the Heads and Hands of Mankind applyed? The Rich had no Commerce, the Poor no Employment; War and the Sword was the great Field of Honour, and the Stage of Preferment; and you have scarce a Man eminent in the World for any thing before that Time, but for a furious outrageous falling upon his fellow Creatures, like *Nimrod* and his Successors of modern Fame.

WHERE were the Men that arriv'd to Characters, to Fame, and to Distinction, by Trade, by the Mathematicks, by the Knowledge of natural or experimental Philosophy? Where was the *Sir Walter Raleighs*, the *Verulams*, the *Boyls*, or *Newtons* of those Ages? Nature being not enquir'd into, discover'd none of her Secrets to them, they neither knew, or sought to know, what now is the Fountain of all human Knowledge, and the great
Mystery

Mystery for the Wissest Men to search into, I mean *Nature*.

As then the World are arriv'd to the height of human Knowledge, which we now see among them, and the improvements of Mankind are so infinitely greater, in these two last Centuries, than they were for so many Years before; let us go in the gradual Enquiry, and give the History of them as briefly as we can. It must be matter of wonder to this Age, and all the Ages to come, to look back and see how poorly the World went on for so many thousand Years, and even so very near the Heels of our Times; and I make no question but that, after Ages, so great are the Discoveries that are still behind, will be as much astonish'd at the Dulness and Ignorance of this Age, as we are at that of the Years behind us.

How may they hereafter, when some effectual Method for ascertaining the Longitude of the Globe shall be discover'd to them, admire at our Stupidity in not being able to find it out sooner? as much as we admire at the Ignorance and Stupidity even of the great Sir *Francis Drake*, and that yet greater Sir *Walter Raleigh*, whose Geography was so weak, and so short sighted, notwithstanding they had the use of the Compass, and knew that the Earth and Sea together must be one united Globe, that they shou'd run away to the Southward as far as the *Canary* Islands, and then stand over West to the *Caribbee* Islands, then North through the Gulph of *Florida*, and so coast along the Shore of that we now call *Carolina* to find out the Coast of *Virginia*, a Voyage almost a thousand Leagues about.

In the same manner, and with no less folly, did all our well skill'd Navigators, both *English* and *Spanish*, even to this very Age, puzzle and perplex themselves, and with infinite trouble,

as

as well as hazard, fatigue themselves in Working for one hundred Leagues through the Straights of *Magellan* to pass into the *South Seas*? which Straight 'tis very probable never Ship will pass through again, there being so fair a way, and an open Sea round *Cape Horn* without any of those Difficulties and Hazards, and very little out of the way; verifying with infinite Advantage that significant tho' homely Proverb, that *the farthest way about*, &c.

THUS the World is daily encreasing, particularly in experimental Knowledge; and let no Man flatter the Age with pretending we are arriv'd to a perfection of Discoveries. I make no question before I come to the end of this Work, to convince the Reader of what was advanc'd in the beginning of it, that,

*What's yet discover'd, only serves to show,
How little's known, to what there's yet to know.*

BUT to go back to the state of the World in the fourteenth and fifteenth Century, and to the narrow Circumstances of their Knowledge either in Trade or Navigation.

THE *Portuguese* were the first considerable Adventurers that we meet with who began to look abroad for new Discoveries, and to plant new Colonies, that is to say in the Ocean. The *Genoese* have it seems made some efforts on the East-side of the *Euxine Sea*, the *Palus Maotis*, and the Straights of *Cassa*, where they had planted some People either at or about *Asoph*, and the Mouth of the great River *Don* or *Tanais*, and the *Borysthenes*. For Example;

THE *Genoese* discover'd and planted for themselves the *Taurica Chersonesus*, that is to say the Country between the great River *Borysthenes* and the

the Straights of *Cassa*, and which is now call'd the *Crim-Tartary*; and the *Genoese* being strong at Sea possess all this Country, then very fruitful and rich; till the *Turks* spread themselves into *Europe*, and finally taking *Constantinople* shut the *Genoese* out of the *Euxine Sea*, not suffering any Christian Vessels to pass the *Bosphorus*, no not to this Day.

IN these Colonies the *Genoese* were so successful and so strong that they built many Cities, and especially Sea-ports, as *Cassa* in particular, on the great Strait or Entrance into the *Palus Maotis*; which from that Sea is call'd the Strait of *Cassa* to this Day; and tho' the *Genoese* were shut out of the *Euxine Sea*, by the *Turks*, as above, about the Year 1450, yet they kept their footing in the *Chersonesus*, and particularly this Port of *Cassa*, till the Year 1574.

BUT the State of *Genoa* having been sunk from all their navigating Glory, and reduc'd to the small confines of their present Dominions in *Italy*; all their *Eastern* Colonies are devour'd by the *Turks*; and they are not now worth naming in the World, I mean as to Improvement and Plantation.

BUT the *Portuguese*, as I noted before, were the Nation of all the Nations in the World, who first looked abroad in the World for Discoveries. *John* King of *Portugal*, an aspiring and enterprizing Prince, hearing that the *Spaniards* had by the height of the *Pico Teneriffe* discover'd the *Canary* Islands, and taken Possession of them, sent out three Ships under the direction of *John Gonzales* and *Tristrian Vaz*, two experienc'd Mariners, in order to find if there were any more Islands in those Seas; and these very happily discover'd and took possession of the Island of *Madera*, in the Year 1420, which has remain'd to the King of *Portugal* ever since.

IN the same fortuitous manner *Don Henry* Prince of *Portugal* discover'd the *Azores*, or, as some call them

them the *Tercera* Islands; a *Flemish* Ship being driven to the Westward by a Storm, as they were on their way to *Lisbon*, fell in with these Islands, and runing in for shelter, and in hopes of relief, found Harbour indeed, but no relief, for the Islands were all uninhabited. After some stay, and the Wind coming about fair, the *Flemings* set sail, and coming to *Lisbon* gave an account of the Place where they had been; *Don Henry*, above nam'd, taking the hint, and desiring them as well as they could to describe the situation, went to Sea in five Ships, and happily discover'd the place, which he likewise seiz'd for the King of *Portugal*, who caused 'em to be planted and inhabited, and the *Portuguese* have been Lords of them ever since; this was in 1449.

ENCOURAG'D by these Discoveries *John* King of *Portugal* resolv'd upon more: And having some very experienc'd Navigators in his Service; I mean experienc'd as the World then went, among whom was *Anthony Nola* a *Genoese*, *Bartholomew Diaz* a *Portuguese*, and several others; they put him upon making Discoveries on the Coast of *Africa*. But King *John* dying in 1433, and his Son *Edward* reigning but five Years, these Adventures were not push'd on effectually till the Reign of *Alfonso* the fifth, Grandson to King *John*, who engaged in them again.

HE began at Cape *Spartel*, the very Mouth of the Straights, and embarking a good Body of Troops in his Ships, sent them to invade *Africa*, and plant Colonies; in consequence of which Commission they took *Tangier* and *Arzilla*, and fortifying them, left strong Garrisons there. Then they proceeded upon the Western Coast forward to the South, till at length they seiz'd upon a small old *Saracen* Town, almost dwindled back into the original of Nature, and turn'd savage again; however

however they found a good Port, and which in all appearance had been formerly in more request, and better frequented than it was at that time; for the *Portuguese* found no Genius for Trade yet among them, or that any other Nation corresponded with them. This Port the *Portuguese* gladly seated themselves in, fortified it, and call'd it *Santa Cruz*.

IN pursuit of those important Discoveries, they took many Places, but were afterwards, by the unhappy Misfortune of their great Expedition under *Don Sebastian*, the next King of *Portugal*, driven out of them all again. This Prince, with a powerful Army, in which was the flower of all the Nobility of *Portugal*, gloriously push'd at a Conquest of the whole *Moorish* Empire, but lost the Battle, and was himself kill'd; in consequence of that Victory, I say, they were again driven out of all these Conquests Anno 1530. But to go back to their Sea Affairs. Their success at *Santa Cruz* led the fortunate *Portuguese* on to search farther South till they came to a noted Cape, which from the greeness and pleasant prospect of the Land they call'd *Cape de Verd*, or *Green-Cape*; and here (at the same time overjoy'd with their Success) stretching out into the main Sea, they found the Islands, call'd by the same Rule the *Cape de Verd* Islands.

THIS Discovery satisfy'd them for the present; and it took them up some time to plant and settle on these Islands, they being immediately valuable to the *Portuguese*; nor have they any cause to repent their possession of them at all, if it were only for the Salt they get there, which so many Ships are loaded with every Year, and of which there is yet no Diminution.

THE *Portuguese* having, as above, lost their first Colonies on the Western Coast of *Africa*, and particularly the Port of *Santa Cruz*, or *Holy-Cross*,

but having in pursuit of the humour for Discoveries, which then seem'd to agitate their Nation, found out the *Cape de Verd*, and kept a long possession of that Coast; so that they were too strong there to be attackt by the *Moors*, even when they re-took their other Conquests; they from thence extended themselves all along that which we now call the Coast of *Guinea*, and seiz'd the Mouth of the great River *Niger*, which they call'd the *Rio Grande*, or the *Great River*; a Name which intimated that the World was not then much acquainted with the course of Rivers; for this was indeed but one of the several Branches, by which the truly *Grand Niger* empties itself into the Sea.

THEY then took the Coast of *Sierra Leon*, or as now vulgarly call'd *Serraloon*, but named by them the *Hill of Lions*, from a discovery, that the Country on that Coast was very full of *Lions*; which might be so at that time, tho' it seems now to be as empty of *Lions* as any part of *Afric*.

HERE the *Portuguese* fortify'd: And tho' they did not build Towns and Cities, as they afterwards did farther *South*, yet they built Forts, settled Factories, and traded with the Natives for such things as the Country produc'd; namely, Elephants Teeth, Skins of Beasts, such as *Lions* and *Leopards*, for other Skins they had none; also *Tammerius*, or *Guinea-Grains*, *Civet* and *Civet Cats*, but especially *Bees-Wax*: As for *Slaves* they had none, neither did the *Negroes* sell one another then, as they do now, neither had the *Portuguese* any Colonies in *America* to dispose of them to, so that the *Slave Trade* was not at that time begun, nor had they found any *Gold* at that time, or not much of it.

IMPATIENT of farther Advantages in a Country which they found fruitful and rich beyond expectation; they went on and discover'd all the Coast, running from *West* to *East*, in the Latitude

tude of eight to four. A Climate, which by its excessive Heat, seem'd to promise neither Product or People : For in those Days, or at least till those Days, the Torrid Zone was always thought to be uninhabited; but to their surprize they found it rich in both.

THEIR first Discovery was made by *Anthony Nola*, a *Genoese*, who rang'd the whole Coasts, call'd now the *Grain Coast*, the *Gold-Coast*, and the *Slave-Coast*, and wintered at the Island of *St. Thomas*, or as they call it *St. Thoma*, an Island situate directly under the Equinoctial Line; a thing surprizing and astonishing at that time.

THIS Island being discover'd on *St. Thomas's-Day*, they call'd it by his Name *St. Thomas*; It was discover'd, I say, on *St. Thomas's-Day*, Anno 1471, and has been in the possession of the *Portuguese* ever since, being very useful in their Voyages from the *Cape de Verd* to the *Cape of Good-Hope*, in their way to the *Indies*, and to take in fresh Water and fresh Provisions, as our *English Ships* do at the Island of *St. Helena*, in their Voyages to the same Place.

UPON this wonderful discovery of the South-Coast of *Africa*, the *Portuguese* found such a vast quantity of Gold upon all the Country, which we now call the Coast of *Guinea*, or the *Gold Coast*, that it enrich'd the whole Kingdom of *Portugal*; and it was so very remarkable, that for forty or fifty Years it was call'd the Golden Age at *Lisbon*; till about the Year 1536, when the *English* came into a share with the *Portuguese* for this beneficial Trade. And tho' at first the *Portuguese* had the possession of almost the whole Coast, yet the *English* shar'd with them a long while in great part of the profit of the Trade; and tho' they did not do so by landing and setting up Factories and Forts on the Country, as the *Portuguese* had done; yet without that

that charge they did it by mere trading with the Natives in such Places where they could find convenient Places to correspond with them; here they made great Advantages by the Commerce, and frequently brought home one hundred to one hundred and twenty Pounds of Gold upon a Voyage; which as Gold then bore a great Price, was a prodigious Cargo: For selling at six Pound per Ounce, the quantity of Gold amounted to seventy two Pounds per Pound; so that they frequently made from eight to ten or twelve thousand Pounds a Voyage in Gold, besides their other Goods, as mention'd before.

AMONG the rest we read of some *French* Merchants who with two Ships and a Bark went on that Coast, in the Year 1556, and brought away seven hundred Pounds weight in Gold in one Voyage, besides Tamerins, Elephants Teeth, and about fifty Slaves, (for Slaves were not bought and sold then, I say, as they are now,) and besides many other Goods, the Gold alone amounting to 50400 *l.* Sterling, an immense Sum in those Times: And our Countryman Mr. *Tower*son, one of the first *Englishmen* who ever went thither on a trading account, brought away in three Voyages with two small Ships, each Voyage above four hundred and sixty Pounds weight of Gold, besides what his Men, to whom he gave certain Liberties of trading for themselves, brought off on account of private Trade.

BUT the *Portuguese* who, as I have said, first discover'd this Coast, took *Livery* and *Seisin*, and settled Factories, fortify'd those Factories with strong Forts and Castles, for defending their said Commerce against, not the *Negroes* only, but against their Neighbours the *Europeans*, who with too much Reason they apprehended might attempt to supplant and remove them; and had those Forts and Castles been as well furnished with Garrisons and

and Cannon, and those Garrisons done their Duty, as carefully as their Masters providently built Forts to cover them, they had not been supplanted and dispossest'd, as they see themselves serv'd at this Day.

BUT so it was that the Kingdom of *Portugal* coming after into the possession of *Philip II. K. of Spain*, and the *Dutch* at that time, a powerful, growing, and encreasing State, having an open declar'd War with *Spain*, some of their most forward Adventurers being sensible enough of the Injury done to their said Principal, by the *Spaniards*, and resolving to see Justice done to their State, in all Places where it was possible, fell into firm Resolutions to do themselves that Justice in part upon their remote Possessions in Trade; such as their Colonies in *Africa* and *India*.

IT was a very unhappy Juncture for *Portugal* that their Country fell at that time into the possession of *Spain*, as I have said; for the *Dutch* had no War with *Portugal* till *Portugal* became *Spaniard*; and in that very interval the *Dutch* took almost all their foreign Dominions from them, as may appear in its place.

BUT I return to the first *Discoveries*, in which the *Portuguese* extended themselves upon the Gold Coast of *Africa*, as I have said; by the successful Adventures of the famous Navigator *Bartholomew Diaz*, who may justly be said to be the most skillful Navigator that the World ever had, who wrought without Instruments, and sail'd without the Compass; for he discover'd even to the *Cape of Good-Hope* before the use of the Magnet and the Needle were known in Navigation.

HE extended himself gradually from *Sierra-Leon* to *Benin*, which is a continued Coast of above 500 Leagues, between the Years 1461 and 1472, and in that time built or laid the Foundation of several considerable

considerable Fortifications; one at the Mouth of the great River or Branch of the *Niger*, call'd afterwards *Senegal*; where the *Portugueze* continue settled to this Day, and where they have several little Strengths a considerable way up the River, and some well inhabited Towns, but not much Gold; if they had, their Possessions had not perhaps been so quiet, and so long. The next Forts of Consequence were those of *St. Anthonio*, *De Elmina*, and *Sebastian*, all upon the Gold Coast, and of all which, with that whole Coast, they have been dispossess'd by the *Dutch*, or other *European* Nations; nor have they at this time any one Fort or Factory on all that Coast, except only one, till you come about the Gulph or Head of the Bay of *Benin*, which we now call the *Slave-Coast*, and where their real fix'd Possessions begin.

HOWEVER, tho' the *Portugueze* have lost all this rich Country, they did not presently do so; and tho' the *Dutch* encroach'd early upon them, yet they were not quite dispossess'd of the Gold Coast, till near 200 Years after the first discovery, namely, till the Year 1646; which as it is matter of History after the Discovery, does not so much come within the compass of this Design. But to go back therefore to the famous *Bartholomew Diaz*:

As he met with such wonderful Success in these Parts, and the *Portugueze* settled with so much Advantage, that the very Nation grew Rich, and as I have said, it was call'd the Golden Age; it may be reasonably suppos'd he was encourag'd to go on. And accordingly, being supplied with Ships and Men, he extended himself farther and farther to the South; and still planting and fortifying wherever he came; he in short gave the *Portugueze* a Name and a Footing at the Mouths of every River, and upon the Coasts of every Kingdom,

dom, from the *Rio Formosa* and *Benin* to the Kingdoms and Countries of *Congo* and *Angola*, and so running on South, merely for the curiosity of what might yet be discovered farther; at length he came to the *Cape de Bona Esperanza*, as he call'd it, from the good hope he immediately entertained, that seeing the Land terminate, as to its extent Southward, and a vast Sea open to the East, he shou'd in time find an open passage into those great *Indian Seas*, which he had heard so much of, on the South Coasts of *Asia*, and which some say he had formerly sail'd into, out of the Gulph of *Persia*: This was done in the Year 1489.

THIS Discovery immediately made a great noise in the World, and the *Portugueze* whose navigating Glory was now grown really very great. sail'd not to continue to bring infinite Profits as well to the public as to the private Merchants concern'd, and this made them extend themselves upon all the Coasts, as above, in such a manner, that it was once said *Portugal* was going to remove into *Guinea* and *Angola*: But they did not end here, for some Years after they stretch'd from the Cape of *Good Hope* along to the North-East, yet still close under Shore. Thus leaving the South-point of *Africa*, and following the Coast, they began Settlements and Colonies on the East-Coast of the Main-land, as they had before done on the West; a Place never heard of before in the World. And here they took hold of the Coast of *Mozambique* and *Zanguebar*, and landing by force master'd the Natives and possess'd the Country. Here they built the Cities of *St. Sebastian*, *Port St. Esprit*, and *Melinda*; the last especially considerable, and continuing so to this Day; and of all which more may be said hereafter. This was under *Don Vasco de Gama* another *Portugueze* Admiral of great fame, and was in the Year 1498 to 1500.

To this time they knew nothing of the Needle or the Compass; so that tho' they cast many a wishful Eye, as we express it, upon the vast extended *Indian* Ocean, and believ'd there were great Things, and even new Worlds to be found beyond it; yet they durst not venture out of sight of Land, especially in such remote Countries, where they found the Sun both in its elevation and declination, was continually on the North-side of them, and they must necessarily repass the Equinoctial Line, tho' they knew not exactly where it was, before they could arrive in their own Country again.



• C H A P. XIX.

Of the Discovery of the Magnet or Loadstone; and how it was many Ages known without any such mathematical Improvements made upon it, as to bring it to be concern'd in our Navigation, with some account by whom it was so applyed.

THE learned Author of *Lexicon Technicum* assures us that the knowledge of the Magnet is very antient, and he quotes it from *Sturmius*. By the knowledge of it he does not only say the knowledge of the mere Stone or *Fossil*, which he thinks approaches to the Species of *Iron Oar*, but that its attractive Quality was known. But even this, which we are not assured of, did not seem to answer the end for which the great Discovery was made, if that especial Application of it to the Mathematics, and in particular to this Branch relating

lating to Navigation had not likewise been discover'd.

NOR was this part the work of a short space of time. The Verticity or Inclination of it to the North was discover'd about the Year 1380, by our Countryman *Roger Bacon*, the same whom we call *Fryer Bacon*, who was a compleat Mathematician; the same which old Stories tells so many fabled Tales about, which have so little Truth to support them; yet 'tis certain this *Bacon* did strange Things by the Magic of this powerful Attractive, and for that was suppos'd to deal with the *Devil*.

BUT even this could not lead us to the use of it in the great Article, which it has since been apply'd to, but it was reserv'd for the honour of an *Italian* of *Gaeta*, in the Kingdom of *Naples*; who finding its Virtue communicative to the Steel, and that all Steel would if touch'd, touch again what it impress'd: Upon this he fell to worship the Discovery, and to spread it gradually into the World; and thus by little and little it came to be of public Use, and the Discoveries which have been made by it, and the Improvements upon it are innumerable; some of them may be sum'd up out of the Learned Mr. *Boyl* and others as follows.

- I. THAT in every *Magnet* there are two *Poles*, one pointing *North*, the other *South*; and if a *Loadstone* be cut or broken into ever so many pieces, there are likewise two *Poles* in each piece.
- II. THAT these *Poles* in divers parts of the Globe are diversely inclined towards the Earth's center.
- III. THAT these *Poles*, tho' contrary to one another, do help mutually towards the *Magnetic Attraction* and to the Suspension of Iron.

IV. IF two *Magnets* are Spherical, one will turn or conform itself to the other, so as either of them would do to the Earth; and that after they have so conformed or turned themselves, they endeavour to approach and to join each other, but if placed in a contrary Position they avoid each other.

V. IF a *Magnet* be cut through the Axis, the parts or Segments of the Stone, which before were joined, will now avoid and fly each other.

VI. IF the *Magnet* be cut by a Section perpendicular to its Axis, the two points which before were conjoined will become contrary Poles, one in one the other in the other Segment.

VII. IRON receives Virtue from the *Magnet* by Application to it, or barely from an approach near it, tho' it doth not touch it; and the Iron receives this Virtue variously according to the parts of the Stone 'tis made to touch, or made approach to.

VIII. IF an oblong piece of Iron be any how applied to the Stone, it receives virtue from it only, as to its length.

IX. THE *Magnet* loses none of its own Virtue by communicating any to the Iron; and this Virtue it can communicate to Iron very speedily, tho' the longer the Iron touches or joins the Stone, the longer will its communicated Virtue hold, and a better *Magnet* will communicate more of it, and sooner than one not so good.

X, THAT

X. **THAT** *Steel* receives *Virtue* from the *Magnet* better than *Iron*.

XI. A *Needle* touch'd by a *Magnet* will turn its ends the same way towards the *Poles* of the *World*, as the *Magnet* will do it.

XII. **THAT** neither *Loadstone* or *Needles* touch'd do conform their *Poles* exactly to those of the *World*, but have usually some variation from them; and this variation is different in divers places, and at divers times, in the same place.

XIII. **THAT** a *Loadstone* will take up much more *Iron* when arm'd or cap'd than it can alone, and that tho' an *Iron Ring* or *Key* be suspended by the *Loadstone*, yet the magnetical *Particles* do not hinder that *Ring* or *Key* from turning round any way, either to the right *Hand* or to the left.

XIV. **THAT** the force of a *Loadstone* may be variously increased or lessened by the various application of *Iron* or another *Loadstone* to it.

XV. **THAT** a strong *Magnet* at the least distance from a lesser or a weaker cannot draw to it a piece of *Iron* adhereing actually to such lesser or weaker *Stone*, but if it come to touch it, it can draw it from the other; but a weaker *Magnet*, or even a little piece of *Iron* can draw away or separate a piece of *Iron* contiguous to a greater or stronger *Loadstone*.

XVI. **THAT** in our *North* parts of the *World* the *South Pole* of a *Loadstone* will raise up more *Iron* than the *North Pole*.

XVII. **THAT**

XVII. THAT a plate of Iron only (but no other Body interposed) can impede the Operation of the *Loadstone* either; as to its attractive or directive Quality; Mr. *Boyle* found this true in Glasses sealed hermetically; and Glass is a Body as impervious as most are to all Effluvia.

XVIII. THAT the Power or Virtue of a *Loadstone* may be impaired by lying long in a wrong posture, as also by Rust, Wet, &c. and may be quite destroyed by Fire.

XIX. MR. *Boyle* found that by heating a *Magnet* red hot, it would be speedily deprived of its attractive Quality.

XX. IF a *Loadstone* be heated red hot, and then cooled, either with its *South Pole* to the *North* in a horizontal Position, or with its *South Pole* downwards in a perpendicular one, it will change its Polarity, the *South Pole* becoming the Northern one, and *vice versa*.

XXI. By applying the *Poles* of a very small fragment of a *Loadstone* to the opposite contiguous ones of a good large *Magnet*, Mr. *Boyle* found he could speedily change the *Poles* of the fragment, but he could not effect it in a fragment that was considerably bigger, tho' he tried many Hours.

XXII. HE observed that well tempered and hardened Iron Tools, when heated by Attrition, turning, filing, &c. would while warm attract thin Filings or Chips of Iron and Steel, but not when cold; yet it has been seen and tried that a large piece of a File, which was in the Hands of Mr. *Tarnwel* the Spectacle-maker,

maker, did retain such an attractive Quality that it would take up and keep suspended the Key of a Cabinet or Scrutoire, and needed no Attrition to excite this magnetical Virtue.

XXIII. THE Iron Bars of Windows, which have long stood in an erect Postion, do grow permanently Magnetical. The lower ends of such Bars being the *North Poles*, and the upper the *Southern*; for according to the Laws of *Magnetism*, we find the lower ends of such Bars will drive away the North end of a poised *Needle*, Southerly; which shew, that by the continual passage of the subtile magnetical Particles through them, they are turned into a kind of *Magnet* themselves.

XXIV. IF a Bar of Iron that hath not stood long in an erected posture, be only held perpendicularly, its lower end will be the *North Pole*, and attract the *South Pole* of a touch'd *Needle*; but then this Virtue is transient, and will shift as you invert the Bar; for the other end when held lowermost will presently become the *North Pole*; wherefore in order to render the quality of Verticity permanent in an Iron Bar, it must remain a long time in a proper Position, but the Fire will produce this effect in a very short time; for as it will immediately deprive a *Loadstone* of its attractive Power, or change its *Poles* (as in Experiment XIX and XX) so it will as soon give a Verticity to a Bar of Iron, if, being heated red hot, it be cooled in an erect Position, or directly *North* and *South*; nay, it hath been observed often, that even Tongs and Fire-Forks, by being often heated, and then set to cool in a Position, near to erect, have gained this magnetical Property; the Reason of which, very
different

different Effects of the Fire on a *Magnet*, and on Iron, Mr. *Boyle*, with his usual Modesty, suggests to be this, that the peculiar Texture or Constitution, by which a *Magnet* differs from common Iron Ore, being accurate and fine, is spoiled by the rude and violent attacks of the Fire; but this mighty Agent by working upon Iron softens and opens the Pores of the Metal (which is harder than Iron Ore) so that it becomes capable of being prevaded by the magnetical Particles, and by that means gain a vertical Quality.

XXV. MR. *Boyle* found, that by heating a piece of *English Oker* red hot, and placing it to cool in a proper Posture, it plainly gain'd a magnetic Power.

XXVI. THE same noble Gentleman found that an extellent *Loadstone* of his own, having lain almost a Year in an inconvenient Posture had its Virtue so impaired, that he at first thought some Body had got at it, and spoiled it by Fire.

XXVII. IF a *Needle* be well touch'd on a good *Loadstone* 'tis known it will when duly poised point *North* and *South*; but if it have one contrary touch of the same Stone, it will immediately be deprived of that Faculty, and by another such touch, it will have its *Poles* quite changed; so that the end which before pointed North shall now point Southward.

XXVIII. DR. *Power* and Mr. *Boyle* both tried, that after a red hot Iron had gain'd a Verticity by being well heated, and cooled *North* and *South*, and then also hammer'd at the ends, this Virtue would immediately be destroyed by
two

two or three blows of a strong Hammer finartly given about the middle of it.

XXIX. Mr. Boyle found by drawing the back of a Knife, or long piece of Steel Wire, &c. over the Poles of a Loadstone leisurely, once or divers time, beginning the Motion from the middle or Equator of the Stone, towards the Pole, the Knife or Wire will accordingly attract one end of a poised magnetical Needle; but if you take another Knife or Wire, and thrust it leisurely over the Pole, from the Pole towards the Equator or middle of the Equator, this Knife shall drive or expel away the same end of the Needle which the former Knife would attract, which Experiment makes it very probable that the Operation of the Magnet depends upon the flux of some fine Particles, which go out at one Pole, then round about, and in again at the other.

XXX. BECAUSE it is one of the universal Laws of Nature; that Action and Re-action are always equal; therefore it is plain, the Iron must attract the Magnet as much as that doth the Iron, and so you may easily experiment it to be in Fact if you place a Magnet or piece of Iron on a piece of Cork, so as that it may swim freely in the Water, for then you will see that which soever you hold in your Hand will draw the other towards it. From all which Experiments 'tis plain (as Mr. Boyle concludes) that Magnetism doth much depend upon mechanical Principles, as also that there is such a thing as the Magnetism of the Earth, or that there are magnetical Particles which continually are passing from Pole to Pole; but Sir Isaac Newton demonstrates that Gravity is a very different thing from Magnetism, since the former is always as the quanti-

ty of Matter attracted, but *Magnetism* by no means so.

SEBASTIAN Cabot, the famous and first discoverer of *America*, is said to have found out the Variation of the *Magnetism* in different Positions; others have improv'd since upon the Variation, and form'd several Experiments upon that Arch which they call the *Azimuth* or magnetical *Azimuth*; which is an Arch of the Horizon contain'd between the Sun's *Azimuth Circle* and the *magnetical Meridian*; or to put it into as intelligible Terms as I can, the distance of the Sun in any particular place from the North or South Pole, and this is found by an Observation; for which they have now a particular Instrument call'd an *Azimuth Compass*, the description of which is not to the present purpose.

UPON this Magnetic Tendency to the Poles, which being communicated to the Iron or Steel, gave the Iron or Steel the same Tendency, have been form'd all the subsequent Improvements of Art useful in Navigation and in Geography. By this the Globe has been regularly measur'd, the imaginary Arch of the Heavens, and the Position and Motion of Things regularly understood.

BY this the Compass was form'd, and several Points before divided more exactly ascertained, and the Analogy form'd between space and time, the Degrees and Miles in space being made to answer exactly to the Hours and Minutes in the measure of Time.

IT would be too voluminous a Task here to describe the many Improvements which take their rise in this great Discovery of the Magnetism of Nature, or rather the various Magnetisms in Nature; I chuse rather to speak of the great Improvements in *Navigation* which attended it; and

and by which all the great Discoveries of distant and remote Countries, and sailing over the vast and almost boundless Seas, which were terrible before but to think of, has been perform'd.

Now the adventurous Mariner confin'd himself no more to the meanness of coasting along the Shores, standing in need of the sight of Land, or of the heavenly Bodies to guide himself in again, when he was gotten at a great distance from the Land, the Needle showing him his way, as I may say, without Eyes; for the Steel pointing always duely to the North or to the South, and thereby showing any other Point, the Mariner immediately found himself at home every where, and in the darkest Night, or the thickest Fog, when neither Sun, Moon, Stars, Land-mark, or Sea-mark, was to be seen, yet they knew exactly both where, and which way they were going.

IMMEDIATELY like young Swimmers grown expert, and who scorn any longer to keep within their depth, and in shallow Waters, but boldly swim off into the Channels of the largest Rivers; so here the Mariners scorning any longer to coast along the Shores as before, boldly travers'd the open Seas with regard to the distances they were in from the Land, so that the widest Seas could not confine their search, or the remotest Climate be conceal'd from their Discovery. By this means in a few Ages we find they make light of stretching from the narrow Seas of *Britain* to the Cape of *Good-Hope*, without ever any sight of Land between; except sometimes the little *Island* of *St. Helena* between, which it is more a Test of their exquisite Skill to find, than it is a mark of Deficiency that they do not find it.

WITH the same boldness and assurance they make a run, and make light of it, over the vast *Indian Ocean*, from the Cape of *Good-Hope* to *Java*

Head, which is almost 2000 Leagues; and again from the *Philippin* Islands over the prodigious Ocean, which we call the *South Sea*, to *Acapulco*; and all these Places they find as directly as a Carrier's Horse does his Road, or as the Carrier himself does the Inn he is to lodge at.

To such a perfection of Art are we now arriv'd merely by the addition of this one Discovery of the Loadstone; and yet we see farther Secrets in Nature every Day, which the same happy Discovery leads into; so that we may say the magnetic Quality of the Earth is an inexhausted Mine of Wonders, in which the farther we look the more Reason we see to expect greater Discoveries than were ever made before.

As the Mariners (made bold by this great Pilot the Needle) have adventured into the vast Oceans, which they durst not launch out into before; so the nature of the Thing requiring it, the Artists and Shipwrights have been call'd upon to build larger and stronger Vessels and Ships of an amazing Magnitude compar'd to what they were before.

SHIPS were no more capable of being row'd with Oars, and moor'd with Ropes. Their Vessels were more like floating Castles than what was formerly call'd Ships; the remotest Nations, and the most antient grown Woods were searched for Timber of sufficient strength to build; the largest and tallest Trees were scarce sufficient to make Masts for them, whose height were now carry'd up to what had never been known; their Yards spread a Clue of Sail to such a breath, that at a distance a Ship carry'd the face of a Cloud rather than a Cloth; in a Word, the Ships were now call'd Carvels rather than Ships; and the *Spaniards* and *Portuguese* frequently sail'd in quest of new Discoveries, and in pursuit of the Trade Improvement

in Vessels of a thousand Ton Burthen, and afterwards of much more.

As they built Ships like Castles, so Guns being also brought into use, they brought their Ships to bear great Guns like as Castles did, and several great pieces of Ordinance were mounted upon these Carvels in such a manner, that they were able to maintain terrible Fights at Sea, and to answer Batteries upon the Shore in their own kind; nay sometimes to over-power the Batteries on Shore, and to enter Harbours and Ports by force, tho' defended by strong Fortifications, and man'd by strong Garrisons.

THIS made the Marine Nations grow powerful by Sea, as well as by Land, and in a few Years the *Portuguese* and *Spaniards* fitted out large Fleets, carrying great strength, of Guns, and their Shipping was able to make them terrible wherever they came.

IT was very remarkable then, and it is even still worth observing, in how short an interval of Time the World came up to this height of Improvement, from the gross Ignorance which they were in before. It was but in 1498, that the *Portuguese*, ignorant of the Compass, and not daring to venture out to Sea, discover'd the Cape of *Good-Hope*, and durst go no farther; and within less than twenty Years more we find them planted upon the *Brazils* in *America*, and Masters of every Coast in the *East-Indies*, even up to the *Spice Islands*, and almost to *China* itself, their Ships carrying vast Burthens, heavy Pieces of Ordnance, and striking a Terror into all the Countries where ever they came.

So swift was the Improvement of the Times, when once they got a taste of Knowledge, and so easily did they let themselves into the most useful part of the Discovery as soon as it was made; nor
was

it long before the rest of the Nations follow'd them at the Heels; and that so soon as in a few Years to over-power them, and indeed in time to supplant them in some of the most valuable Settlements and Possessions they had, especially in the *East Indies*, and on the *Gold Coast of Guinea*.

BUT that which is the most surprizing in this driving the *Portuguse* out of their foreign Plantations and Factories, is this; that the *Portuguese* lost not only their Possessions, the *Dutch* taking from them all their Forts and Factories, Possessions and Estates, especially in the *East-Indies*, but they lost their navigating Genius, and their Fame as Seamen, and from being esteem'd (as in the fifteenth Century they were) the best Seamen in the World, they are now sunk down in their Reputation to the very worst; so that nothing on this side the *Mediterranean* is look'd upon with more contempt, or treated with more disdain in those Things than a *Portuguese* Seaman, whether we speak of the ordinary Mariners or the Masters.

IT is true they did act vigorously in one Case; and indeed if they had not they would by this time have had little or nothing left of all their foreign Acquisitions worth their keeping; and this was in recovering their great Colony of the *Brazils*, which the *Dutch* once had taken entirely from them, and kept the Possession of for several Years. But when the Duke of *Braganza* assum'd the Crown of *Portugal*, taking up Arms against the *Spaniards*, and by the assistance of Duke *Schomberg*, recover'd and settled the Crown in the said House of *Braganza*; as the *Portuguese* vigorously recover'd their Liberty from the *Spanish* Yoke in *Europe*, so they took Arms too in the *Brazils* against the *Dutch*; and after a faint Resistance only the *Dutch* were oblig'd to quit the whole Country to them, and they retain the Possession of it to this

this Day ; and it is now the most powerful and wealthy Colony in the World ; of the Commerce of which, and its prodigious Improvements I have much to say in its proper place.

HAD not the *Portuguese* recovered this great Plantation of the *Brazil*: all their Settlements on the Rivers *Benin* and *Congo*, and in *Angola*, had been useless to them ; for they had no occasion for the great number of Slaves which they now get in that Country ; from whence we are assur'd they carry near 60000 Slaves a Year, and which is the chief Trade of their *African* Possessions, as well on that Side as at *Melinda* and *Madagascar*, the Coast of *Mozambique* and that of *Zanguebar*. It is true they carry some Gold, and a great quantity of Ivory from these Coasts, but then the greatest part of it is carry'd farther Eastward to the Coast of *India* and *Malabar*, and to other Parts of *India*, where the *Portuguese* have yet a Trade.



CH A P. XX.

Of the several Discoveries of the Islands and Continent of America. The early product of the knowledge of the Needle, and its Uses in Navigation. Also of the Northern Navigators in quest of the North-East and North-West Passages to China; and whether it is probable such Passages ever will be discovered.

AS the knowledge of the Needle, and its being apply'd to such mighty Purposes in Navigation, came forward in the World with the beginning of the sixteenth Century, it was wonderful even to astonishing, to reflect how swift its Progress was.

CRISTOPHER Columbus setting out from the *Canary Islands*, as if he was assur'd there was a new Western World to be found out, tho' he neither knew or had heard of any such thing, sail'd directly West, not knowing whither he went, and resolv'd to go on till he found something.

IN this Voyage he sail'd long enough to discourage any Man in the World, and to put it out of question to him, that if he found nothing he and all his Men must inevitably perish and eat one another, for he could never hope to subsist himself in going back again. In a Word he sail'd 987 Leagues by his reckoning, from the *Pico Teneriffa*, all the way due West, and never saw any thing but Land and Sea; enough as, I say, to discourage

courage any Man alive, when happily, and to the inexpressible Joy of him and all his Men, on *St. Luke's-Day Anno 1586*, they discover'd Land, which proved to be the *Babama* Islands, by him for that Reason, call'd *St. Luke's*, and since that the *Lucaya* Islands.

FROM hence he went North-West and discover'd the Coast of *Florida*; but finding it a barren Country, he turn'd South, and landed upon the Islands of *Cuba* and *Hispaniola*; after which, making farther and more ample Discoveries, he return'd to *Spain* to give the King of *Spain* an account of what he had seen and done.

IT must be confess'd this was putting their improv'd Knowledge, *young as it was*, upon the Tenters; and I may say, stretching it to the utmost, the vast extent of Waters which they were upon, and which they yet knew not the end of, was frightful; and *Columbus* himself, tho' some say he had seen some of the Southward of the *Caribbee* Islands, where the run was shorter, (*viz.*) from *Cape de Verd* by above 1000 Miles, began to give himself over for lost.

BUT this encourag'd them, and indeed is the solid comfort of the Sailors Knowledge, by virtue of the never failing unerring Tendency of the Needle always pointing to its Pole; I say this was their dependance, and this encourag'd them, (*viz.*) that they knew they did not wander, they knew they did not drive this way and that, as the Winds or Currents wou'd have carry'd them, but that which way soever the Winds blew, or the Currents set, they still kept true to their Point, and went strait on; so that they every Day, nay every Hour went farther and farther due West, and were able (whenever they thought fit to give over the pursuit of their design) to have turn'd directly back again, and if their Provisions would hold them, to

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have come home to the *Canaries* from whence they set out.

IT is true they were unhappily longer than they need to have been upon this Voyage; that is to say, they had a longer run before they discover'd Land, because they kept so much to the Northward of the Line; namely, in the Latitude of twenty three to twenty four Degrees; whereas if they had steer'd two Points more to the Southward all the way, they wou'd have made Land at some of the Eastmost Islands, either at *Hispaniola* or *Porto Rico*, or some of those Places in the Latitude of twenty Degrees, or thereabouts; but this mistake they soon learn'd to rectify: With this encrease of Mathematical Knowledge came many other useful Discoveries, as well as those of Navigation, such as relate to the Shipwrights Art, and other Mechanick Trades.

FIRST of all the learned Men, as if all Nature was newly laid open to them, made daily more and more Discoveries in the Principles of Things; Mines and Minerals were also infinitely encreas'd; the People more boldly ventur'd into the Bowels of the Earth than before, and the Miners dug in the Earth as the Sailors work'd upon the Waters by the Compass. Infinite Experiments were made by the *Boyls* and *Newtons* of that Age; for all modern Knowledge seems to have builded upon their first Experiments and to stand upon their Shoulders; Chymistry, Alchimy, Refining, Separating, Purging, Sublimating, and even to that yet unknown, tho' not unsought Mystery, call'd Transmutation, all had their rise and invention in these Ages, and much of it from these beginnings.

PHYSIC felt the advantage, and daily Experiments added to the Knowledge of the Learned, as the Discovery of new Countries encreas'd the
Pharmacy

Pharmacy of those Times, and added noble Simples and innumerable invaluable Particulars to the *Materia Medica* of the Physician. The *Spanish* and *Portuguese* Missionaries sent over by the Church, that is to say by the Congregation *De propaganda fide*, were many of them Men of Learning; some of them, especially the Jesuits, had studied Physic, and were really good Physicians, others studied Nature, and were curious in searching after Drugs, Plants, Gums, and other Simples, and others after Minerals and Metals; so that Nature was merely ravag'd, as I may say, wherever they came.

By these those glorious medicinal Drugs, strange exotic Plants, and Animals, with several other valuable Things were discover'd, which the World heard nothing of before; such as the *Peruvian Bark* that sovereign and specific Medicine in all intermitting and periodical Fevers, and even in that Witchcraft (or Possession, I know not what to call it) which we name an Ague: The *Cantharides*, or as vulgarly call'd *Spanish-Flyes*, of wonderful and various Operation in Physic; the *Lapis Contrayerva* equal, nay superior to the famous *Gascoign Powder*; the *Indian Root* or the *Hypococnana*, esteem'd the best Emetick in the World; *Balsam* or *Balm* of *Peru*, more valuable than that of *Gilead* or of *Mecca*; the *Snake Root*; the *Tamarinds* or *Guinea Grains*, the *Civet* of *Africa*, and many others, too many to enumerate.

LIKEWISE of Drugs for Dying, or as we ordinarily call them *Dye-Stuffs*; such as *Logwood*, *Fustic*, *Nicaragua Wood*, *Brasiletto*, *Shumack*, *Indico*, and *Cochineal*, the last the inimitable Drug for fixing the brightest Scarlets, Crimsons, and Purples; and which was never heard of before; and to crown all, the *Cocoa* of which we now make *Chocolate*, the *Sugar Cane* and *Pimento*, the

Coffee of the *Red Sea* and the *Tea* of *China*, with the *Lack* or *Lacquer* of *Japan* and *China*, and the *Earthen Ware*, or *China Ware*, also of the same; not forgetting the *Furs* or *Peltry* of *North America*; and to close all, the *Tobacco*, a Plant never heard of in the World till the discovery of *America*.

THERE are indeed no Metals that were found out in any of the Parts thus discover'd, which were not known in *Europe*, except a kind of mixture of Tin and Lead, which we call *Tentenague*, of which the *Chineses* make their Canisters for Tea, and with which they line their other Vessels of Copper or Iron, Earth or Wood, and is very good for keeping such things in, as are nice in Smell, and apt to be ting'd with the tast of the Metal or Wood which the Vessel was made of; like as we tin over our Copper Saucepans and Boylers, and all our white Iron or Latin, of which we make small Vessels for Kitchen Service; but I say, as to Metals we found none new; neither Jewels, for as to Emeralds, Pearl, Diamonds, and Rubies, all those the World had seen before.

IT would require an Index of Curiosities and Rarities in Nature should I go about to describe all the Particulars which the discovery of the *East* and *West Indies* furnish'd us with; which are now become as familiar to us as if they belong'd to and were the product of our own Soil: Some of them are us'd in Physick, others in Food, some in Arts, as Dying, Painting, and Laquering; some in Manufacturing, some in Ornaments, and all in Trade; I say it requires an Index of Rarities too long for this Work; but many of them will come of course to be spoken of hereafter.

IN the mean time it ought to be mention'd here, that not only Navigation fortify'd by the addition of the Mathematicks arriv'd now to daily Improvement, and Discovery, and animated the
People

People of these parts of the World to an extraordinary search after new Worlds, sailing in new Seas, and pursuing new Adventures; but according to my Title I ought in some measure to enter upon the History of those new Discoveries, and give at least an historical Account of the Discoveries themselves, and the time of them; that so we may at once take a view of the foreign Plantations, Colonies, and Factories, which the several trading Nations of *Europe* are at this time possess'd of in *America*, *Africa*, and *India*, and of the encrease of their Improvements in those Countries.

IN doing this I shall come of course to the material part, and which indeed is the chief design of, and the end of this whole Undertaking; namely to seek after such farther Discoveries as are still behind.

ALL praise worthy Knowledge seems to have a Tendency to some thing farther to be known. The great encrease of local Discovery invites us still to something beyond itself, which is still less to be discover'd. Neither *Africa* or *America* are yet fully discover'd: There are yet infinite Treasures of Trade and Plantation, to be search'd after, innumerable Nations not convers'd with, navigable Rivers not sail'd up into, unknown Lands not travers'd, and unknown Seas not navigated.

THE Center of *Africa*, the Extremes of *America*, the Mountains of the *Andes*, the Rivers of *Amazones* and *Oroonoque*, and all the vast Country between them are to this Day unconquer'd by the *Spaniards*, and unenquir'd into by any other Nations. These two Rivers are navigable at least a thousand five hundred Miles, if not two thousand Miles each; they receive innumerable other Rivers which are likewise navigable many Miles, perhaps hundreds from the North to the South in their way; there are

are numberless Nations of People, vastly populous Cities among them, no *European* has ever visited them; yet neither does the Heat or Cold defend them, or make them inaccessible. Let us then enquire a little after what is known, and after what is still to know, and see (if we can) how much more, infinitely more the latter is than the former, that we may whet the Industry of future Ages, and tell our Posterity a little of what is before them.



C H A P. XXI.

Of the several Countries discover'd, Colonies planted, and Factories settled by European Nations after the discovering the use of the Needle or Compass in Navigation, and from thence thro' the whole fifteenth Century.

I H A V E observ'd already all the Coast of *Africa* from Cape *Spartel*, at the Mouth of the *Mediterranean Sea*, being in the Latitude of thirty two to thirty three Degrees North, and being the North-West Point of *Africa*, to Cape de *Bona Esperanza*, in the Latitude of thirty four Degrees and half South; being the farthest point of the Land of *Africa*, South; also about again to the East Shore of *Africa*, and along the Coasts of *Mozambique* and *Zanguebar* to the Latitude of seven to eight Degrees North; I say, these were all discover'd and planted by those three famous Navigators for the King of *Portugal*, *Anthony Nola a Genoese*, *Bartholomew Diaz*, and *Vasco de Gama*, *Portuguese*, and all before the beginning

beginning of the sixteenth Century, and before the finding out the knowledge of the Magnet, or at least before the use of the Needle in the Compass; which I mention, because for that Reason I have nothing to do with it in this Chapter.

HITHERTO the best Navigators were mere Coasters; they never willingly lost sight of Land, nor ever thought themselves easy if they did. If Storms began to threaten, the Winds ruffle them, and the Seas run high, they were sure to make in for the first Port they could reach, or to come to an Anchor under the first Weather-Shore they could make; nor did the timorous Sailors fail upon many occasions of such Hazards, which we now call trifling, to run on Shore for safety, haling their Ships into such Creeks and Coves as they could get them into.

ON the contrary, in our Ages, the Seamen act upon quite other Notions. When it blows hard, and (as the Seamen call it) a *Fret of Wind*, the bold Mariner, having a good Ship under him, shuns the Shore as the only Terror, and as the principal place where his Danger lyes; he desires nothing more than *Sea-room*, good Ground Tackle, and a tight Ship; the first to preserve him from Shoals and Rocks, and the next to ride out a Storm, when in Port; I shou'd have added indeed the last, namely, that this is always suppose him to have a tight Ship under him; for that is indeed a Seaman's main Dependance.

Now, no sooner was the knowledge of the Needle discover'd, and the Seaman had obtain'd this infallible Guide, by which he could always tell by Candlelight as well as Daylight, within Board as well as without, and as well without the help of Sun, Moon, and Stars, as with them, which way they were going, and which way they ought to go; I say, no sooner was this obtain'd, but the fear

fear of launching out, was all over; the Business was done; narrow Seas or broad Seas, Gulphs or Straights, Bays or Oceans, were now the same thing to the Mariner; he had no more to do but to inform himself rightly of the situation of every place to which he was bound, or where he found occasion to put in, and look upon the Globe or Plane of Surface, for the Latitude and meridian Distance, and he knew the way to it directly.

O'er all the liquid Mountains of the Sea.

HENCE Geography fell to work to draw Charts and Maps of the Coasts, and to place every thing in its right Position upon the plane of the Globe; that every Port, River, and Harbour, being plac'd in its true Latitude, the truly skillful Seaman might be able by the Rules of this Art to know as well where it was, as which way to go to it, and how to find it.

IN consequence of this Art, the long conceal'd World began to show itself, and be found out; nothing could easily escape the indefatigable search of the diligent Seamen. As the Great thirsted after Conquest, and the Merchant thirsted after Gain, so the skillful Mariner and expert Artift thirsted after new discover'd Countries.

No Country was without them; Spain had its Columbus, *Jaquez Velasco*, *Ferdinand Cortez*, and its *Francis Pizarro*; Portugal had its *Nola*, *Gama*, and *Diaz*; France, tho' they made the meanest Discoveries, had their *Sala*, *La Hontan*, *La Barre*, and *Hennepin*; the Dutch had *Heemskirk*, *Barents*, and *La Maire*; and England, tho' they came in late, had their *Drake*, *Raleigh*, and *Frobisher*; *Davis*, *Hudson*, *Willoughby*, *Smith*, *Sommers*, and many such; by whose Vigor and Application, England, tho'

tho' she came in, *I say* late, very late, yet got as great a share of new Possession as she well knows what to do with, and which are in many respects equal to the best.

By these Adventures such mighty Things have been done, and such vast Conquests and Discoveries made, as no History can parallel; not all the rapid Conquests of *Alexander the Great*, or of *Cyrus* before him; not *Julius Caesar* with his boasted Motto *Veni vidi vici* ever came up to the conquering Army of *Cortez* and *Pizarro*, who with less than 600 Men in their biggest Armies, as they call'd them, respectively, invaded a fourth part of the World, subdued Empires, slew Millions, gave Battle to Armies of 100000 Men at a time; the Histories are known (tho' too long to repeat) besieg'd Imperial Cities, such as *Mexico* and *Cusco*, and took their Emperors in the midst of their own Palaces, and surrounded by innumerable Guards.

THE Particulars are out of my Business; the manner of their Conquests are the Subject of long Histories; I am to bring them all into one Chapter; I shall notwithstanding be as explicit as I can.

THE Spaniards having by the navigating Skill of *Christopher Columbus* discover'd the Isles of *Cuba* and *Hispaniola*, *St. John de Porto Rico*, and *Jamaica*, *Jaques Velasco* was sent with five Ships and 300 Soldiers; with which Force he subdued those two vast Islands, where he conquer'd, and as Fame says, cruelly destroy'd five Millions of People.

FROM hence *Ferdinand Cortez*, with at most four hundred Foot and forty Horse, landed on the great Continent of *America*, near *La Vera Cruz*, march'd up sixty Miles into the Country; fought and beat an Army of 40000 *Tsalcallans*, and after that another of 100000; after which the said *Tsalcallans* suing to him for Peace, became his Allies, and furnishing him with Provisions, he undertook

the most daring Attempts that the World ever heard of; namely, to march directly to the Imperial City of *Mexico*, and attack the great *Montezuma*, the mightiest Emperor of *America*, in the midst of his Armies, and in a City said to contain two Millions of People.

IN a Word, he march'd, enter'd the City, was driven out of it again, recruited his Army to the number of five hundred Foot and eighty Horse, return'd, besieg'd the City, took it, kill'd 120000 People in the Storm, slew the Emperor, overthrew the Empire, destroy'd the City, re-built it, made it the Seat of the *Spanish* Empire in *America*, and so it continues to be to this Day.

THIS handful of Men, then extending every way, carry'd on the *Spanish* Conquests for above two thousand Leagues, even from the Latitude of forty Degrees North, to fifty three Degrees South, to the Mouth of the Straights of *Magellan*, subduing infinite Nations of People, another Empire, viz. that of *Peru*. And process of these Conquests they now possess *Florida*, *Guadalajara*, *New* and *Old Mexico*, *Guaxaca*, *Nicaragua*, *Guatemala*, *Tucatan*, *Honduras*, *Darien*, *Cartagena*, *St. Martha*, *New Granada*, *Venezuela*, *Caracas*, *New Andalusia*, *Peru*, *Chili*, *Cusco*, and all the Countries upon the *Rio de la Plata* down to the East-side of the Straights of *Magellan*.

THIS is the Sum of the *Spanish* Empire in *America*; an extended Dominion, which were it fully planted, as it is possess'd, wou'd be more than the whole *Roman* Empire in its utmost extent, even as it was estimated in the Days of *Trajan* himself.

NOT but that it ought to be consider'd, and it will not be amiss to mention it here, that agreeable to my Title there is but little yet known compar'd to what there is yet to know, even of *America* itself; and in order to this I lay it down as a Truth,

Truth, which I am able to demonstrate, viz. That notwithstanding the *Spaniards* are actually possess'd of all the middle part of *America*, the whole Empires of *Mexico* and *Peru*, and the Kingdom of *Chili*, extending for two thousand Leagues in length, as has been describ'd; and notwithstanding the *Portuguese* are, as they say, Masters of both North and South *Brasil*, for above seven hundred Leagues in length, from the *Rio de Amazonas* or *Orelliana*, under the Line, to the *Rio de la Plata*, in the Latitude of thirty five Degrees South; and the *Spaniards* possess the said *Rio de la Plata*, and the Navigation of it, from the Spring or Fountain Head of the said River, at the City *La Plata* in *Peru*, to the *Atlantick Ocean*, and notwithstanding the *English* and *French* possess all the Shores of the great Continent call'd *North-America*, from *Hudson's Straights*, and the *Terra di Labradore*, in the Latitude of sixty six Degrees North, to *Cape Florida*, in the Latitude of twenty three, with the Island of *Newfoundland*, the great River *Canada*, the Country of that Name, and perhaps the *Louisiana* or *Mississipi* down to the Gulph of *Mexico* with all the Islands of the *Caribbees*, as well Windward as Leeward: Notwithstanding all this, yet, I say, there is much more of *America* undiscover'd, and at least unconquer'd and unpossess'd, than all the rest put together amounts to, whether we consider the extent of the Land, or the Numbers and Strength, and as I believe Riches and Wealth of the Inhabitants.

I. IT is to be consider'd, that all the part we call *South America*, from the Straights of *Magellan* South, including *Cape Horn* and the *Terra del Fuogo*, in the Latitude of fifty eight, to the *North-Sea* or Coast of *Caracas*, in the Latitude of ten Degrees North, is so far from possess'd, that it is only the

Coasts which are discover'd, whether by the *Spaniards* or the *Portuguese* in any Place. For Example;

ON the West-side, which we call the Kingdoms of *Chili* and *Peru*, the Mountains of the *Andes*, which run parallel with the Sea for three thousand Miles, are the confess'd Limits of the *Spanish* Dominions; and on that Side we do not find the *Spanish* Bounds reach any where one hundred Miles from the Sea, till they come the length of *Lima*, where it opens a little to the East, to the Cities of *Cusco* and *Plata*, and the Mountains of *Potosi*, and then stretches away North again to the Country of *Popayan*.

ON the North-side, which is all that Country from *Cartagena* to *Cape Dragon*, including the several Provinces under the *Spanish* Dominion, call'd *Cartagena*, *St. Martha*, *Venezuela*, and *New-Andalusia*; I say, in all these it is the Coast only which the *Spaniards* may be said to possess; for they have so little else, that they are no where Masters of any thing above a hundred Miles within the Land; nor can they possess what they have so far, without daily Assaults of the Natives; who with poison'd Arrows and Launces repay the *Spanish* Cruelties so effectually, that the *Spaniards* care not how little they engage with them: And all the Country farther South, to the River *Oroonoque*, is evidently out of the Possession or Power of the *Spaniards*, who as often as they have attempted to possess it for the sake of the Wealth and Fruitfulness of it, they have found their Settlements overthrown, their People massacred, and all Hopes taken from them of planting again with security; the Natives being not only
Bold

Bold and Daring, but so infinitely Numerous, that it wou'd be a kind of Desperation to attempt them, unless it were with powerful Armies regularly supplied and duly supported to carry on a general Conquest.

IT is evident these People are not Tame and Passive, as the *Spaniards* found the Inhabitants of *Cuba* and *Hispaniola*, or those of the *Honduras* and *Guatemala*; but Brave and Daring, not terrified with the noise of a Gun, or the glittering of the *Spaniards* Swords and Armour; but tho' they have no Guns, they boldly run up to the Teeth of the *Spaniards*, and wounding them with poisoned Launces, fly from one to another with a strange kind of Courage, next to Desperation; depending upon this, that if they can but wound a *Spaniard*, so as to make him bleed, they know he is a dead Man, and so fly to another.

BUT not to dwell upon their manner of Fighting, this is the Consequence which reaches to the present Case, (*viz.*) That the *Spaniards* contenting themselves with the Possession of *Cartagena*, and other Ports and Places on the Sea-Coast, to secure their Commerce and Communication with *Europe*, they study as much as possible to live in Peace and good Neighbourhood with the several *Indian Nations* behind them, who they know to be populous without Number, and therefore maintain their upland or inland Possessions and Settlements, chiefly as a Barrier against them, and to carry on a gainful Commerce with them.

As this is the Case upon the whole Coast, it demonstrates what I say above, that the Possessions of the *Spaniards* are but trifling, compar'd to the main Continent; and suppose it were two hundred Miles, which we do not find it reaches any where, except about that part call'd *New-Granada* and *Popayan*,

Popayan, and where it may be said to joyn with *Peru*; yet what is this to the vast extended Country behind it, to the River *Oroonogue*, and from thence to the *Orelliana* or *Rio d'Amazones*; and thence again to the *Rio Parana*, *Paraguay*, and *La Plata*? a Country of very near two thousand Miles square, full of Wealth, and full of Millions of People, fruitful, and to a Miracle cultivated, the Savage Inhabitants consider'd, and in all which, it may be said, that never *Spaniards* set a Foot there, except a few *Priests*; and those at a Price too dear to encourage any to venture to follow, for most of them were massacred by the Natives.

II. WE are to take Notice of the Plantation of the *Portuguese* on the East, or rather North-East part of *South-America*, which we call the *Brasils*. The *Portuguese*, according to their gasconading way of Writing, talk mighty big of this Colony; and it is indeed a very great Plantation, as I shall take notice of by itself; and I must add, that had any Nation but the *Portuguese* been Masters of it, the Improvement of it had been infinitely greater than it is. But take it in the utmost extent which the vain boasting *Portuguese* can pretend to; namely, from the Mouth of the *Orelliana*, or River of *Amazones*, to the *Rio de la Plata*, which is thirty five Degrees in Latitude, and which is 2100 Miles; yet what is it but a Verge of the Country, compar'd to the vast Continent behind them? The Christians (if the *Portuguese* may be call'd so) indeed are fully possess'd of the Sea-Coast: But how far do they extend themselves within the Country? From the Mouth of the River *Amazones* to *Pernambuco*, which is near five hundred Miles, and is call'd the *North-Brasil*, they are no where Masters of the Country fifty Miles from the Coast; nor have they any Cities or fortify'd

tify'd Places farther into the Country. If they correspond with the Natives higher up, it is by Compacts and mutual Agreements, and the Civilities of Neighbourhood and Commerce; but the *Brasilians* are very numerous and powerful, and especially having now learn'd the use of Fire-Arms, and obtain'd the Trust of them too from the *Portuguese*; which by the way was none of the best pieces of Policy on their Side.

THESE *Brasilians*, I say, (who are very numerous) live at large in their own Towns and Villages, close at the Heels of the *Portuguese* Settlements; where in spite of all the *Portuguese* can do, they enjoy their own Government, such as it is; live their own Way, do their own Business, reserve to themselves their own savage Customs and Manners, and which they are very Tenacious of; and more than all retain their own Idolatry, and the Barbarisms of their own Heathen Rites (I cannot call it Religion.) This I instance to prove, as it effectually does, that the *Portuguese* have little or no influence upon them, and consequently are very far from any Government or Dominion beyond the Bounds which they antiently possess'd; and which indeed is no more than a narrow Verge of the Country, as I have said, even all the way from the *Equinoctial Line*; (for the *Rio d'Amazones* enters the Ocean just under the Equator) to the Latitude of thirty five Degrees South. The farthest place where the *Portuguese* have enter'd into the Land, is said to be at St. *Salvador*, where they tell us, their Gold Mines, newly discover'd, are three hundred Miles up the Country.

AND tho' this is begging the Question for one particular Spot, and I do not grant it to be so far by above one hundred Miles; yet even this, for one place does not alter the Case; for so the *Spaniards* may be said to possess all the Country upon
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the *Rio de la Plata* to *Peru*, because they have of late made a kind of settled Commerce by the Navigation of that great River, between the Country of *Peru* and the *Buenos Ayres* in the Mouth of the River.

BUT even this also is carried on by a civil Usage of the Natives, of whom several Nations inhabit that great Country, tho' nothing so Populous neither, as farther to the North; and this Navigation the *Spaniards* make profitable to those Natives, otherwise they could never preserve it; but I say they make it profitable to them, by buying Provisions of them, and giving them *European* Goods for them; such as Knives, Hatchets, Scissars, Beads, and other Toys, such as they like; as also Cloths, Callico, Linnen, and other Necessaries; but as to Conquests and Dominion, even the *Spaniards* themselves do not pretend to it here. Nor do the *Portuguese* in the *Brasil* attempt to exercise any Authority over the *Brasilians*; as particularly appears in this, that they employ none of them as Servants; nor will the *Brasilians* be their Servants; nay, they will hardly assist them in any laborious Work, tho' paid for it.

MUCH less do the *Portuguese* make any of them Slaves; but on the contrary they bring all their Slaves from *Africa*; and all their Drudgery is done by those *Negroes*, the *Brasilians* being free, and scorning to labour for any one but themselves.

I NEED only refer for the Truth of this to *Neuboff's* Account of *Brasil*, and to even the *Portuguese* themselves.

THUS it is evident all the center of this vast Continent of *South-America*, for near four thousand Miles in length, and for two thousand Miles in breadth, in some Places more, is yet entirely undiscover'd, and not in the least subdued; and tho' it

it may be said, that the Southmost part of this Country is not full of People, especially from the Latitude of forty Degrees to the *Magellanic Straights*. But it is answer'd;

I. WE do not know how it may be peopled far within the Land; and as for the Coast, tho' our People have not found the Inhabitants numerous, yet they always found some People, tho' they were unconvertible, and fled from the *Europeans*, when they saw them; and it is more than likely, that in the more inland Parts of the Country they might be more Populous.

II. BUT for the Northern Parts, as particularly all the Coasts of the Rivers *Parana*, *Paraguay*, the *Marahon*, and the *Rio Grande*, with all the inner Country of *Brasil*, as far as has been seen or heard of, they are full of People, even surprisingly so.

III. All the Country bordering on the South-side of the *Rio d'Amazones*, and all that vastly extended Country, between that River and the *Oroonoque*, reaching for two thousand Miles from West to East, and above one hundred and fifty Miles from North to South, are so exceeding full of People, so throng'd, and so continually multiplying and encreasing, that if the Country were not the most fertile and productive of all manner of Things needful for human Life, it would be impossible they should subsist; nay, some who have calculated upon the Accounts given by *Texiera*, *Orelliana*, *Sir Walter Raleigh*, and others, tell us, that if the rest of the Country is equally Populous with that Part which they saw, and as there is Reason to believe it is; there must be more People in it than

there was in all that part of *America* which the *Spaniards* subdued, and in which, according to *Los Casas*, the *Spaniards* put forty Millions to Death, besides those that escap'd their Fury by flight, or were otherwise so fortunate to escape them by Favour.

IN a Word, we have Reason to believe that there is no Christian Nation in *Europe*, where the like Numbers of People are to be found in a narrower compass than on the Banks of the *Rio d'Amazones*, or of the *Oroonoque*, except just the United *Dutch* and *Flemish* Provinces; where the particular advantages of Commerce have drawn such Numbers of People together

IT is not improper to mention here, what some Historians have, and not improperly suggested on this Occasion, that the great Ravages which the *Spaniards* made in *America*, at their first landing among those innocent People, and the Terror which their Cruelties struck into the Minds of the Inhabitants, was such, as made all those who were at distance sufficient, fly for their Lives, with their Wives and their Children, into any of the adjacent Countries that would receive them, and that could shelter them from the Fury of their Enemies.

THAT thus, from the adjacent Countries of *Peru* West; from *Nicaragua*, and *Guatimala*, North-West; from that which we call *New-Granada*, *Venezuela*, and *St. Mariba* North; in all which Countries, the Cruelties and Butcheries of the *Spaniards* were sufficient to terrify the poor People; I say from these Parts it is suppos'd vast Multitudes, nay Millions of poor frighted People fled into these remoter Countries, among the Fastnesses of inaccessible Woods, and Mountains; for the *Cordileiros* or Mountains of the
Andes

Andes begin in that part of the Country next to *Peru*. Hitherto, I say, no doubt they went; and being hunted thence by the *Spanish* Horse, fled afterwards farther into the flat Country, where the vast Confluence of Waters and Springs forms the great Rivers *Paria* or *Oroonogue*, and *Orelliana* or *Amazones*; the latter of which is no less than three Miles broad, two thousand Miles from its Influx into the Sea.

AMONG these Waters they were secured, the *Spaniards* being in no Condition for such a pursuit, and finding also a sufficient Wealth in the Palace of the Emperor of *Peru* to glut their Avarice, till they fell out about sharing the Spoil, and so fell to killing one another, and gave the *Indians* some respite.

THAT the *Peruvians* fled hither, is less doubted; for the *Spaniards* perceived, upon *Pizarro's* murdering their King, and plundering his Palace, that the People of the Country were as it were vanish'd on a sudden, and to be seen no more; that is to say in such Multitudes as they at first appear'd in; and yet they had not massacred so many of them, as they had done in other of the Provinces before. Upon which *Pizarro* caused the Country to be penetrated Eastward and Southward to find out the Inhabitants; but the People he sent soon brought him Word, that the Mountains Eastward were unpassable; and as to the Country Southward, which was *Chili*, he soon met with such Resistance there, and so did the *Spaniards* that succeeded him, that they began to be weary of the War, and were glad to let the *Chilians* alone; and thus their Conquests received a Check for some time.

As they fled to the Mountains of the *Andes*, to the Sources of the River of *Amazones*, and the inaccessible Lands among those Rivers, from *Pi-*

zarro and his *Spaniards* in *Peru*; so they fled in Multitudes from the same wicked and bloody Rage in the Provinces of *Popayan*, *New Granada*, *Venezuela*, and *New-Andalusia*; and these took Shelter Southward, on the Banks of the *Oroonoque*; a Country, by the like prodigious Conflux of Waters, as difficult of Access as the other. And these Nations, which were infinitely Numerous, taking Shelter in those Low-Countries, which were fruitful and rich, and qualify'd fully to receive and entertain them, 'tis no Wonder, that all that part of *America* is now so exceeding Populous.

II. FROM hence take a View of the Northern Parts of *America*, such of them as are known and discover'd; for it is not with the North of *America* as it is with the South. The South is known to be every where surrounded by the Sea, except in the small Isthmus of *Darien*; and our *European* Ships of several Nations have sail'd round it, and do so continually. But as to the North Part, we have discover'd only one Side of it, namely, the East; we neither know its extent one way or other, North or West, whether it joins West to the Land off *Jesso* and *Japan*, or North to *Europe*, and the Lands round and beyond the Pole.

IT is discover'd indeed to *Frobisher's Straights*, and the Coast of *Greenland*, as far as to eighty Degrees North Latitude. But tho' all that Land how poor and how severely Cold it may be, is yet inhabited; those Inhabitants remain unvisited, except on the first Discovery, and the Country lyes abandon'd and deserted.

WE have three great Inlets into the Land of *North-America* from the Sea; that is to say at *Hudson's Straights*, and all the several Bays call'd *Davis's*, *Baffin's*, *Button's*, and *Hudson's*, but little or no Possession; and all to the Westward of those Bays, be it as far as *Asia* or not, tho' full of People,

People, is unpossess'd by the *Europeans*, except our *English* Settlements at the bottom of *Hudson's Bay*; where at best, we have not two hundred People; so all those deep Bays are in the Hands of the Natives, of what Nation soever they may be call'd, and how Numerous soever they are.

THE next Inlet the *Europeans* have into the Land is, by the River of *Canada* or *St. Laurence*; and here the *French* indeed visit and discover great Tracts of Land up to the Lakes *Heuron*, *Illinois*, and several others. But what are all the Countries that the *French* have planted? Are they not full of the Native Inhabitants unconquer'd, unsubdued, and who live under their own Kings or *Caisicks*, and govern'd by their own Laws, make Peace and War absolutely as they please? The *French* are only a handful of People here and there planting a little Ground, by the Banks of the Lakes and Rivers; and who being dispers'd into many Places, and at great Distances, are not to be nam'd with the infinite Multitudes of People which spread over all that Country to the West.

LET any one that pleases to follow this Observation read but Father *Hennepin*, and the Discoveries of *Monfieur De Salle*, of *Ferdinand Soto*, and of several others; and they will find that the undiscover'd Country is, to that planted by the *French* more than as ten thousand to one.

EVEN the Colonies of the *English* in *New England*, *New-York*, *New-Jersey*, &c. What are they but a long measur'd out Plantation upon the Coast? None of those Colonies have any Possessions or cultivated Lands above 150 Miles from the Sea worth naming. Let them go up the River from *New-York* to *Albany*, which is the highest and most remote of all the Colonies, or up the *Delaware* River, where the Waters joyn almost with those of *Virginia*; nay, let us take the third great Inlet of
Water,

Water, which is that we call the Bay of *Chesapeake*; yet even here the bottom of the Bay is not above two hundred Miles from the Capes or Entrance; and as it goes away North, it is not full 150 from the Sea in a Line, the Bay running away due North, after it receives the first Rivers of *James* and *Tork* and *Rapahannock*.

W H A T then are these Colonies, tho' Great in themselves, and Powerful and Potent, as now increas'd, compar'd to the vast Continent of *North-America*? whose extent North I have describ'd a little, and whose Western Coast is not yet discover'd? neither do we yet know whether, *as I said*, it is bounded by the Sea *yea* or *no*.

H O W little then of this newly discover'd World is yet known, compar'd to what there is yet left to know? And what room is here still for the industrious World to put themselves forth for the extending the Discoveries already made, and forming the Nations, whether by Conquests or otherwise, into Societies, both for Commerce and for Strength?

T H I S Part, tho' remote from the present Argument, is not so far from the design of this Work: And tho' it may be spoken of more largely hereafter by itself, yet I may take this Notice of it here; *namely*, that this very thought opens a Door for future Ages, and for yet more enterprizing Nations, to think of enlarging the *European* Settlements in all these Parts of *America*; which as it may easily be done by making their beginning with sufficient Strength and Numbers of People; so where attempted with such sufficient Numbers, the fertility of the Soil may more than sufficiently answer for the Success. For no Plantation undertaken by sufficient Numbers of industrious People can fail of Success, if the fertility of the Soil is such, as may answer to produce, the blessing of
Heaven

Heaven concurring, a sufficient encrease for their Subsistence. To make this feasible in any Place, I shall in short propose it for one Place, in the Manner following.



C H A P. XXII.

A Proposal for a new Settlement in America, - being wholly founded on the mere Improvement of the Land as a Plantation, without any view of Commerce till after the first Success is ascertained.

T H E R E is a large tract of Land in *America* unpossess'd at present by any *European* Nation; abandon'd for so long, as that, even the *Spaniards* themselves do not, and cannot, even by a long prescription of Years, lay any Claim to it.

T H I S is that Country, beginning at the Plains of *St. Andrew*, above the Bay of that Name, about 120 Miles South of the *Rio de la Plata*, in the Latitude of thirty seven, and reaching to *Port St. Julien*, in the Latitude of fifty to fifty one, being in length fourteen Degrees, or 840 Miles from North-East to South-West.

T H I S Country extends from East to West, from the Shore of the *Atlantick Ocean* to the East-side of the Mountains of the *Andes*, which limit the Possessions of the *Spaniards* in that part of the Kingdom of *Chili*, which extent is in the most Northern part at least 1200 Miles, narrowing gradually, as the Continent is narrow'd to the South-West, till
off

off of *Port St. Julien*, at the Mouth of that River the breadth is about 560 Miles.

As the Climate in this Latitude must necessarily be Temperate, the coldest Winds, which in a South Latitude must blow from the South, coming over but a small tract of Land, and then blowing every way from the Sea: So Experience of Travellers assures us of another important Article for Temper of Air, (*viz.*) That the Surface is generally *Plain*, not Mountainous and Hilly; and Dry, not Boggy or Fenny; fully suited, and indeed prepar'd by Nature to produce Grass and Corn, the two great Articles of Man's Sustenance, and to make a healthy Climate both for Man and Beast.

THAT the Soil bears Grass in a great and extraordinary Manner, we have first the Testimony of several *English* who have view'd it, and have found for above 100 Miles within the Land, the whole Surface cover'd with good Grass, fit for Pasturage of Cattle; and as far as they could see, the Plains lay extended every way, all full of excellent Grass, high in its Season as a Man's Knee; and when graz'd down by the Cattle, matted with Clover, and an excellent Turf fit for Sheep or Horses, and as good as can any where be seen.

THAT this Grass is sweet and good, qualify'd to feed and fat up the largest black Cattle, is evident, past Contradiction, from this, that the black Cattle carry'd into the *Buenos Ayres*, and other Parts, by the *Spaniards* and *Portuguese*, having been suffer'd to run Wild, have so encreas'd, and spread themselves to the Southward of the River *De la Plata*, that most of this Country is over-run with them; and the Hunters from the *Buenos Ayres* make it a very great Trade to kill them for their Hides, which is the chief return of Merchandize
which

which they now bring from that Port, the Ports South of *Pern* only excepted.

THE fertility of the Soil and temperature of the Climate thus ascertain'd, what remains then to secure a flourishing Settlement but beginning such an Undertaking with a sufficiency of two Things?

I. A SUFFICIENT store of Corn for Bread only, for support of the Colony for one Year, till the Land being cultivated and planted might produce a Sufficiency of their own for future Supply.

II. A SUFFICIENT Force to preserve and protect the Settlement against any assault of the *Spaniards*; as to the Natives, their Number is not considerable.

As to Flesh, the Country abounding in Deer, and Black-Cattle, there wou'd be no need to provide. But lest the Pains of Hunting shou'd be thought too great a Hindrance of the more needful Work of planting the Land, a Breed of Cattle might be taken in, either at our own Colonies of *New-England* and *Virginia*, or at the *Brafsils*, where the *Portuguese* have a very great plenty of all kinds, as Cows, Horses, and Hogs.

Now, not to enlarge on the several Excellencies of this Country for a Colony, it is particularly adapted for a Colony of *English*, by the aptness of the Climate and of the Soil, for all the usual growth of *England*, such as *English* Corn for Bread, Barley for Malt, Apples and such other kinds for Cyder, &c. In short, the Country is as it were singled out for *Englishmen*; not only to live in, but to live just after the manner of *English* People's living. Not too hot to bear Wheat, or to make Malt, or to preserve Beer; not too cold to produce

the tenderer Plants for Kitchen Gardening, for wearing Cloths, and dressing after the ordinary Manner; or too Cold for the Health and Safety of the Cattle, who in violent Colds, deep Snows, and continued Frosts, perish for want of Food.

NOR is the Country over-grown with Woods, so as in *New-England, Virginia*, and all the Northern Colonies, where there is no present Planting till after immense Labour and Expence to clear the Ground of Timber, and prepare it for the Corn; whereas this Country, tho' supply'd with Woods at proper Distances, lyes already plain, over-grown with good Turf, is already good Pasture, and the Plow may be immediately set into it to make it good Arable.

To these Advantages take the following Negatives.

- I. HERE are no venomous Creatures; such as in the *Brazils*, the Country is dangerously full of, (*viz.*) Here are no Snakes and Serpents; of which in the *Brazils*, they find some as big as a Man's Thigh, and fifteen to twenty Foot long.
- II. No Lions, Tygers, Wolves, Elephants, Bears, or other ravenous and furious Beasts, at least we do not read or learn from Travellers who have been on Shore here, that any such Creatures were ever seen; no nor so much as Monkeys and Baboons; a kind of Creatures many ways mischievous and destructive to the diligent Planter.
- III. No Allegators or Crocodiles in the Rivers, nor any other noxious Creatures, at least not that I have heard or read of, and I have been diligent to gain Information by both.

WITH

W I T H all these Encouragements, What shou'd hinder a Colony being planted here with Success? All the Miscarriages of former Colonies wou'd be secur'd against here. It is observable, that all the Plantations which the *English* establish'd in *North-America* met with great Difficulties, and Disappointments in their Beginnings, but that all of them happen'd from some other of these Causes and Accidents.

I. T H E Treachery or Falshood and Cruelty of the Natives or *Indians*. Thus in *Virginia* they suffer'd two Massacres; and in *New-England*, three very fierce Wars, all in the infancy of their Settlements, and almost to their Ruin.

II. DISSENTION among themselves, which was twice the Ruin of *Virginia* in particular.

III. NEGLECT of Friends in *Europe* not supplying them in time, till they, having no Product of their own, have been ready to starve; nay, some have perish'd, and others abandon'd the Colonies, by reason of the extreme Necessities they have been reduc'd to.

A L L these three Heads are and may be effectually guarded against in this Settlement, and that in such a manner as to be without the least Apprehensions of them, or any of them. For as to Natives, as I have said, here are no Numbers to make them formidable; and as to the *Spaniards* either they are to be treated with, or fought with, and either of them is easy enough.

As to private Dissention, an establish'd Authority and Government sent with them, may sufficiently provide against and prevent it.

A N D as to Supplies, a sufficient Magazine carry'd at first, puts the Colony out of Fear, the Soil
P p 2 being

being ready for the Plow as soon as they come there, which was not the Case in any of the other.

SUCH a Colony being settled in this manner and secured of Success, the next Enquiry wou'd be, What encrease of Commerce wou'd this be to us, and how wou'd they Trade?

SIR *John Narbrough*, a well known Person for his Experience in such Things as these, being sent by King *Charles* the Second in the *Sweepstakes* Man of War for the discovery of the Straights of *Magellan*, winter'd in this Port, and went several times on Shore with twenty or thirty Men at a time, spreading themselves, sometimes one way and sometimes another, to take a view of the Land, and gives the same Account as I have had confirm'd from other Hands; and as I have here taken Notice of, (*viz.*) that the Ground is not Mountainous; he likens it to *New-Market Heath*, that it bears excellent sweet and good Grass, and wou'd bear good Corn.

HE confirms also, that they found in all their stay there, nothing Venemous, nothing Ravenous, no noxious Vermin, Insects, or Serpents, nor any of those most nauseous of all Gods Creatures, Monkies or Apes; but Ostriches and Guianacoes, that is *Peruvian* Sheep, which are as large as Mules, and carry Burthens like Mules in *Peru*, as also abundance of Deer.

BUT to return to the Subject of Commerce, for without Commerce, say the enquiring World, of what use is a Colony? To this I answer:

- I. NUMBERS of People make Commerce in the very consequence of their living together. And therefore the first Article wou'd be, that as they must have all their Clothes, Utenfils, and Furniture, from *Europe*, there wou'd be immediately, with a new encrease of People, a new Consumption of the

the Woollen and Linen Manufactures of *Europe*, besides all the necessary demands of Iron, Brass, Lead, Tin, Copper, &c. in all the necessary Materials for the Conveniencies of Life.

II. THE Inhabitants, who, tho' not so numerous as to be troublesome or dangerous, yet are not wanting, wou'd soon be civiliz'd, so as to wear Clothes of some sort or other, and consequently wou'd encrease the said Consumption.

III. T H E R E could be no question, but that a Correspondence wou'd be soon establish'd over the *Andes*, or by Passages which the Natives wou'd discover into *Chili*, and so to the *South Seas*; and whether the Correspondence were with the native *Chilians*, or with the *Spaniards*, or with both, the consequence wou'd certainly be a very great Market for all kinds of *European* Goods, especially our own *British* Product and Manufactures as above.

IV. A N D to crown all, I cannot doubt, but such an *English* Colony, as they grew great and consequently strong, wou'd be able to extend themselves into *Chili* itself, so as to plant there, and secure to themselves some important Harbour on the Shore of the *South-Seas*; of which there are many, which the *Spaniards* have not possession of, and never had any, whatever Claim they may make to the Property of them, according to their antient Pretences, that the Pope gave them a Right to all the Kingdoms of the *American* World; which was no more the Pope's to give than it was the King of *Spain's* before he gave it; so that the Right is undoubtedly in the *Chilians* or native Inhabitants; who as they were never conquer'd, and never conceded their
Right

Right to the *Spaniards*, or to any other Nation ; so they have still a Right of Inheritance, and may concede it to the *English*, or any other Nation whatsoever.

THIS Part, and the Advantages of it to *England* above any Colony, or indeed above all the Colonies they yet possess in *America*, wou'd take up a Volume by itself to enlarge upon ; it is evident at first sight, that there is in its view an Ocean of Commerce, and a Sea of Wealth, were it rightly pursued ; but I cannot dwell upon it here.

HOWEVER I must not leave it abruptly neither, for in farther Answer to the Question propos'd, about what benefit of Commerce wou'd come from such a Colony, it remains to say what Returns we shall find there. How shall the Ships be freighted back ? And how shall they pay for the Goods they will take from us ?

I MUST confess it is not likely that a Country so well situated for a Plantation, and so encouraging for People, shou'd want a Product to return to *Europe* ; and tho' it may not be obvious to a Stranger at first View, give me leave to say in the General, 'tis only the best qualify'd for, and the best furnish'd with Returns, of any Country wherever the *English* are yet planted on the Continent of *America*.

NEW-ENGLAND and *New-York*, and all our Northern Colonies are distress'd for Returns ; and were it not for our Islands which take off their Corn and Cattle, (*viz.*) Their Flower, Peas and Malt (in Beer) their Fish, Pork, Beef, Horses, and Lumber, they wou'd not be able to pay *England* for the Clothes they wear ; and instead of being an Advantage wou'd be an insupportable Burthen to us and to themselves ; for they have nothing to make Returns to *England* in, but Furs and Skins of Beasts,

Beasts, which they call Peltry, Train-Oil, Turpentine, Rice, and Tobacco; the two last appropriate to *Carolina* and *Virginia*; the rest wou'd not in their Value load the tenth part of the Ships that go thither, or pay for one twentieth part of the Goods they consume. But here on the contrary, are several rich and valuable Articles for Returns, of which, as the Country can never be exhausted, so we can never be glutted with the Quantity.

- I. As the Mountains of the *Andes* are known to be full of Gold on the West-side, by which the *Spaniards* receive from the Country of *Chili* an immense Treasure every Year, yet are not said to have made any effectual Search, such is their Sloth, or to find any more of it than the Natives bring them from the Rills and Brooks issuing every where out of the Hills; so it cannot be reasonably doubted, but that the Rivers and Brooks issuing from the same Mountains on the East-side, and of which there are an exceeding great Number, must partake of the same Treasure; to which Eastern-side of the Mountains this Colony wou'd immediately extend itself.

NOR do I speak this only upon the probability of it, as above, but the Experience of divers, who have travers'd the Country, even close up to those Mountains, from the *Rio de la Plata*, who confirm it, that it is really so. And Sir *John Narbrough* in his Wintering there, as above, found several small pieces of Gold, tho' at so great a Distance.

So that upon the whole there is a moral Certainty of Gold; and that even, tho' a Communication with *Chili* should not be obtain'd; and if it should be obtain'd, as it does not seem rational to question, then the having Gold in any reasonable Quantity,

Quantity, is no more to be doubted, than it is, that there are Rivers issuing from the Mountains and running into the *South Seas*.

II. THERE is a Commodity infinitely valuable in *Europe*, because extreamly wanted, and in its proportion as sure a Wealth as Gold itself, and that is *Salt-Petre*. This we have likewise the Testimony of Sir *John Narbrough* for, who asserts it of his own Knowledge, both as to the *Quality* and the *Quantity*; that it is found on the Surface of the *Earth*, and in several Pits; so that as he gave King *Charles* an account, many Ships might be loaded with it.

III. THE Hides of Black Cattle are to be had without Number in the North Part of this Country, towards the *Rio de la Plata*, and which we cannot doubt of getting, because we know they are at this time, the chief Return of any bulk, which is brought from the *Buenos Ayres*: And we know likewise by unquestioned Evidence, that all that part of the Country is over-run with those Cattle, whose Flesh the *Spaniards* destroy for the sake of the Hide only, and these Hides are in point of Merchandize, such a Return as *Europe* can never be over-stock'd with.

IV. THERE are likewise Deer Skins, Ostrich Feathers, and Seal Skins in great abundance; which may be call'd an Article for Returns, tho' the Quantity may not be great, but the other three Articles are sufficient.

WHAT Drugs, medicinal Plants, or Minerals, may be found, must be left to farther Discovery. But why shou'd this Country be wholly void of
such

such Things, of which almost all the World produce some.

T H E R E are many navigable Rivers which give Inlets into the Country, and consequently make farther Discoveries easy; the Sea is full of Fish, and at least there can be no question but great Quantities of Train Oil would be made; so that in a Word there could be no want of Returns to support and establish Trade.

T H E Product of Corn wou'd be great, and on Occasion they might come in for a share of selling it to the *Portuguese* in *Brazil*; who tho' they have plenty of other Grain, yet are always willing to buy *European* Flower, which this wou'd be, tho' growing in *America*. But shou'd that fail, it is not a longer Voyage, nor any way so hazardous, to *Barbadoes* and *Jamaica*, than it is from *Ireland* to those Islands; so that they might send Beef, and Pork, and Flower, and Beer, directly thither, the Voyage taking at the medium of the Colony, being 1140 Leagues, that is to say, from forty Degrees South, to thirteen or seventeen Degrees North, with very little variation of Longitude: Whereas from *England* to *Ireland*, and thence to *Barbadoes*, is thirty seven Degrees in Latitude, (*viz*) from fifty to thirteen, besides the Westing in Longitude, and besides the danger of the Voyage.

I N E E D say no more. If any Man enquires after the prospects of future Improvement promis'd in this Work, let him take this for one; and tho' I may propose several more, yet I cannot say the whole World can present one more Promising, more capable of infinite Advantages, or every way more suited to the *British* Nation, as well the Constitution of the People as of their Commerce.

N. B. Sir John Narbrough, in his *Voyage mention'd* above, being sensible of all that I have said here about a Settlement; and in order to obviate the Pretences of any other Nation, as far as those Pretences may be ground'd upon Possession, took a formal Possession of this very Country in the Name of King Charles the Second, his then reigning Sovereign, declar'd he found the same uninhabited by any European Nation, and fixing up a Cross of Wood, with an Inscription cut in Brass fixt upon it, he proclaim'd King Charles Sovereign of the Country: This I mention (not that I think any Body has a Right to dispossess the Natives of a Country) to intimate, that at least the English have as good a Title to it, as any other Nation whatsoever.



C H A P. XXIII.

Of the several Attempts made for Discoveries of and for Planting in the unknown World, after the obtaining the knowledge and use of the Magnet, and of the Compass; and particularly of the Portuguese beginning their Trade in the INDIES.

I SHOULD now go back to the Discoveries made in the fifteenth and sixteenth Century, and proceed to take Notice, how, in consequence of that great Discovery of all, I mean *the Compass*, Navigation being as it were let loose, and the Seaman's Hands unty'd, which were fetter'd and manac'd before by their Ignorance, not daring to venture far from the Shores; I say in consequence

quence of this great Discovery, all the *European* Nations went to work, spreading the Seas with Ships, and searching every part of the Ocean for new Worlds.

GAMA and *Diaz*, who had, as above, travers'd the main Land of *Afric*, to the Cape de *Bona Esperanza*, and about to *Melinda* and *Mosambique*, now launc'd out Eastward; and passing the great Island of *Madagascar*, as a thing beneath their Ambition, and which they might secure afterwards, press'd on over the *Indian Ocean* till they happily discover'd the Coast of *India* itself: And the first Place they landed upon was at *Calicut*, where they fix'd and fortifyed; from thence they coasted the Shores of *Malabar*, and discover'd the Island of *Ceylon*, loading their Ships with *Pepper*, *Cinamon*, and other Spices; as also *Callicoes* and *Silks*, and in short a prodigious Cargo came back. Upon the same Coast they saw and set their Hearts upon the City of *Goa*, tho' not in Condition then to attack it, but from thence they steer'd West again for *Madagascar*, where they landed, gave the Name of *St. Augustine* to the Bay and Port, which still retains that Name; victualled their Ships with good Beef salted and dryed in the Sun, stor'd themselves with fresh Provisions, Wood and Water, and came safe back to *Lisbon*, making a most surprizing advantage of the Voyage, which caus'd them to fit out again three Ships the next Year: Then they seiz'd upon the City of *Goa*, but were beaten out of it again by the *Indians*, but the next Year took it again, and have kept it to this Day. And making this the center of all their Acquisitions in the *Indies*, proceeded to the Eastern Part, and in three Years afterwards made themselves Masters of all the rest of the trading Parts or Coasts of *India*; such as that of *Coromandel*, *Golconda*,

Bengale

Bengale, Sumatra, Java, with all the Spice Islands, and even from thence North to China and Japan.

How they were afterwards wound out of all these again, either by Force or Stratagem, or both being, supplanted and driven from them all by the *Dutch*, is matter of History, not of Discoveries or Improvements, and so does not relate to the Subject I am upon.

WHILE the *Portuguese* were busied in these successful Adventures to the East, some of their Ships by the mere Misadventure of bad Weather, and a great and continued Storm from the South-East, being driven far West in their Voyage towards the Cape of *Good Hope*, and almost in the utmost Despair, lest they shou'd perish for want of Water, or by the Fury of the Storm, happily made Land to the Westward, in the Latitude of twelve Degrees South of the Line, and running in at all Hazards discover'd that glorious Colony, such they have since made it, of the *Brazils*; which giving an account of to the King of *Portugal*, at their return, a little Squadron of five Ships were sent the next Year to take Possession of it. These entering the River of *Pernambuco*, they took Possession of the Country and built the City *Olinda*, now call'd by the Name of the River, and *Port Pernambuco* or *Pernambuco*; from hence they have spread their Possessions since, as far North as to the *Rio d'Amazones* under the Line, or in the Latitude of thirty Minutes North, to the Mouth of *Rio de la Plata*, in the Latitude of thirty five Degrees South, being no less than 2000 Miles in length; the encreasing Wealth of which Colony we all have an account of yearly from *Lisbon*, the *Portuguese* generally one Year with another bringing from thence two Millions Sterling of Gold in Specie, besides an immense Value in Sugars, *Brazil Tobacco*, Hides, and other Goods.

DURING

DURING these Acquisitions of the *Portuguese*, which were indeed infinitely beyond what any other Nations had made at that time, the *English* labouring as it might be said not in the Fire, but in the Extremities of Cold, made equivalent Discoveries to the North, not at that time equivalent in Wealth, but afterwards by the inimitable and unwearied Diligence of the People, made equivalent in every thing; I mean their several Plantations of *Virginia*, *Newfoundland*, *New-England*, *Bermudas*, *Hudson's Bay*, and such other Colonies as they fix'd upon, on the Continent, or near it, of *North America*; and which we have since seen improv'd also in their Degree to an unexpected Magnitude; I say unexpected, because of the Difficulties which they met with in their first Attempts; by the Repulses from the Natives, who many times furiously supplanted them, destroying at once the Labours of many Years, and sometimes treacherously massacring and murdering the People: Notwithstanding all which, we find them now advantageously planted; and by the force of Industry, and the help of Commerce, we see those Colonies yielding a Return of *Tobacco*, *Rice*, rich *Furs*, *Trayn Oil*, *Turpentine*, *Fish*, and sundry other Productions of the Continent; and *Sugars*, *Indico*, *Ginger*, *Cotton*, *Cocoa*, *Pimento*, and other Productions of the Islands, which are in their amounts, and as improv'd by our Trade, equal to the Gold of the *Brazils* and the Silver of *Potosi*.

IN the same compass of time we find the *French* making Discoveries in the Bay of *St. Laurence*, the Rivers of *Canada* and *Mississipi*, and planting the Inland part of *North America*; from whence however they have as yet found nothing to bring back, but *Furs* from the Land, and *Fish* from the Sea; which notwithstanding has made those Colonies very profitable to them. They have also a large
Share

Share of the Island Colonies, together with the *English* in the *Caribees* or *Antilles Islands*; such as *St. Martin*, *Guadaloup*, *Santa Cruz*, *Marygalante*, *Petit Guaves*, a Colony on the East-end of *Hispaniola*, also *Martinico*, *Granade*, and several others of smaller note, but chiefly upon *Newfoundland*, where they have improv'd the Fishery to a considerable degree.

It is true the *Dutch* had no Share in these Improvements; however they came in afterwards by way of Spoil, upon the Improvement and Labour of the *Portuguese*, as has been said. We are to understand that the *Dutch* were at this time labouring under the Weight of a terrible War with the *Spaniards*, and were not a State, or Government, or People, till many Years after these first Discoveries, as all that know any thing of their History must needs know; it is no Wonder therefore, that the *Dutch*, however diligent a People they are, and fam'd for their Application, even to Discoveries; yet as they were Subjects to the King of *Spain*, and had no Being as a Nation, they could not be concern'd in any of the most early Improvements and Discoveries of those Times.

Thus I have in a Summary way run through the Adventures of those first Ages of Navigation. the Improvements of these Discoveries will take up an agreeable as well as profitable Part of our farther Progress in this Work; and what Improvements are yet behind to make, and which will probably be made in these and other Parts of the World not yet attempted; as particularly an *Ethiopian* Commerce, which I take to be a Scene of Trade yet unopen'd, and which bids fair to out-do in Profit to us the Commerce of both the *Indies*, as I shall make appear at large: This and several others I shall leave to treat of in their Order.



The CONCLUSION.

AS these four Months of this Work bring down the most early Discoveries and first Improvements of Mankind to a particular Period, I mean the time when by the discovery of the Magnet and the use of the Compass, Men were particularly qualify'd to visit remote Countries, and make both Discoveries and Improvements also in Trade and Plantation; so really it wou'd be abrupt to publish them to the World thus in one Article without summing up briefly what is past, and taking a little notice of what is to come.

It could not be, but that when we come to run over the Advances which the Men of the most early Ages made in these useful Branches of human Knowledge, such as Art, Science, and the planting foreign and new discover'd Countries abroad, our account should be a kind of an abridgment of Things, and we shou'd be able to speak but to Generals only. It was indeed impossible it shou'd be otherwise for the improving Nations left few Accounts of their Improvements behind them; the Ages gave no Histories of the Undertaking, or of the Undertakers; we have little left to judge of their Works but by the Effects of them.

We know the *Phœnicians* planted Colonies at *Carthage* and at *Cadiz*, and we know the *Carthaginians* planted again on the Coast of *Africa*, and of *Europe*, every way; because we have seen the Colonies planted, bearing the Image and Superscription, nay the very Names of its Planters; and remaining after *Carthage* itself has been destroy'd; as at *Cartagena* in particular the Name is preserv'd,
and

and the Memory and Idolatry, the very Customs, Rites, and Usages of the *Carthaginians* were found among the *Moors* when the *Mahometans* came upon them, and are among some of the Southern Natives to this Day.

FROM the scatter'd Remains of *Roman* Antiquity in all the Nations where the Eagle spread its victorious Wings much of the *Roman* History is drawn out, and the many Breaches and Intersections of the Historian's lost Labours are supplied.

FROM the Systems of a few of the antient *Greek* Philosophers the Wisdom of the Wisemen of the *South* is handed down to us, and by the Fragments of Astronomy, us'd by the Antients, the more perfect Experiments have been made; so that Learning seems to be descended to the present Ages by Inheritance, and they stand upon the Shoulders of the *Chaldeans*, *Persian*, and *Arabian* Astrologers; that is to say Star-gazers, for they were but little better at first.

NOR can the particular History of the gradual Improvements of the World in these superior Branches of human Knowledge be collected otherwise, than as they discover'd themselves in now and then an extraordinary Man in the World. It was a dangerous thing for a Man to be a little more than ordinarily knowing in any Mathematical or Astronomical Knowledge, the World stood at Gaze at him; they either exalted him to the Skies, and plac'd them among the Gods; as *Mercury* and *Bacchus* are said to be exalted, or plac'd them among the Wonders of Nature; as *Atlas*, *Prometheus*, *Hercules*, and others; or condemn'd them as Witches, Wizards, and Dealers with the Devil; as *Dr. Faustus*, *Fryer Bacon*, and several others more Modern have been serv'd; who were honest Men, but more than ordinarily intimate Searchers into Nature,

ture, and thereby acquir'd a stock of Knowledge superior to others in the Age they liv'd in.

THE Manner being thus imperfect, by which we have at best come at the knowledge of the most antient Things; it follows, that our search into Antiquity must be likewise very imperfect, and the Gradations of the Antients in their several Improvements in Science and useful Arts, very hard to describe. It is enough therefore, and our Readers will we hope expect no more from us, that we are able to deduce Things from just Originals, and hand them down as Nature has been helped to hand them to us in the General, till we come to the Ages in which History has been more regular in recording Things worthy to be known with a due certainty.

HITHERTO we have given an account of what the World did before, and without the helps of Art; now we must enquire a little what the World did afterwards, and with such Helps, and how the Wisemen of the World manag'd themselves, after such useful Expedients, as these were introduc'd among them.

As Heaven had bless'd them with such helps to Knowledge, we see they have not been idle, at least these Northern Nations have not: And how have we by improving these noble Discoveries learn'd to pity, or rather despise the rest of the World, (who know nothing of them) as grossly ignorant, stupid, and incapable?

IT will remain to the compleating this Work, that we should now go on to enquire into the several Steps made upon the Foundation of these great and useful Discoveries, for the encrease of the Wisdom and Understanding of Men; and for the carrying on Commerce and Conquest in the World; for it is apparent it has not been for nothing that

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Heaven

Heaven has open'd these Treasures of Wisdom and Knowledge to the World.

WHAT Embellishments then have they been to the Creation? What Beauties have they added to the Minds of Men? What Additions have they been to their Wealth, to their well living, and to their well-doing? For Wisemen will add every Day something by their Knowledge to every new thing they see and know.

THIS will be a very profitable Enquiry many Ways, and particularly as it will direct the World to the farther Improvements, they are yet to make upon most, if not all the several Articles which are already improv'd.

THERE are no doubt new Countries and Lands yet to be discover'd, new Colonies to be planted, which were never discover'd, or planted before; and which is still worth our Consideration those already planted are capable of new Improvements, and farther Planting, which I think I may call improving. For Example, I think no Man can doubt, at least I cannot be perswaded to doubt, but that COFFEE might be made to grow in Countries of the same Latitude, and to the same Perfection as at *Mocha*; and we need never be at the Trouble and Expence to send to the *Arabian Gulph*, and pay our Money in hard Species for it to the *Turks*, when it might be rais'd in the same or a more Southerly Latitude upon the Coast of *Africa*, or in the Islands of *America*; in both which we are or may be possess'd of Places of our own proper Growth for the planting it. For Example, *Mocha* is upon the Continent of *Arabia*, in the Latitude of eleven Degrees or thereabouts; we again have a Factory at the Mouth of the *Rio Grand*, or near it, and at *Sierra Leon* in *Africa*: Why might not we be able to improve a Colony there, or thereabouts, for the planting of Coffee? as the *Dutch*, for Example, have shown us the way, and

and done it at *Batavia* in much the same Latitude? Or if that will be suppos'd not to be practicable, tho' I know not why, we have then Islands in the *West-Indies*, which we call our own; such as *Tobago*, *St. Vincent*, and even *Jamaica* itself, which we have Reason to believe, tho' not exactly in the same Latitude, would all of them produce the Plant if it were try'd; but on the Coast of *Guinea* we have the very exact Latitude to plant it in, and therefore no Objection can lye against that.

I N the like Case, can any Man perswade us to believe, that *Nutmegs* and *Mace* will grow no where but in the Isle of *Banda*; *Cloves* no where but at *Ternate*, *Amboyne*, &c. and *Cinnamon* no where but at *Ceylon*; that *Tea* will not grow in any Dominions but those of *China*; or that the same Latitude and Temperature of Climate wou'd not produce the same Plants?

LET the Experiments be made and the Negative prov'd, and then indeed no Man will oppose it, for Demonstration puts an end to all Arguments; but till then we must be allow'd to judge as Reason and the nature of Things direct us.

I MIGHT go on to explain myself as to Improvements in many Cases, where some particular Plants useful in the World are kept up as a Property to such and such Nations, and no Body suffer'd to Trade in them, but such and such; as *Coche-neal* seems to be engross'd by the *Spaniards*; *Sugars* to the *American* Islands and Colonies; and so many other Things which we are not able to produce nearer home, by being possess'd of the same Climate in other Parts of the World; but this requires a farther room for Discourse.

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